DIGITAL KEYBOARD

PSR-F52

SERVICE MANUAL

■ CONTENTS

SPECIFICATIONS 3
PANEL LAYOUT 4
DISASSEMBLY PROCEDURE 5
CIRCUIT BOARDS 11
TEST PROGRAM 19
DM CIRCUIT BOARD CHECK METHOD 24
SYSTEM BOOTING FLOWCHART 25
PARTS LIST
BLOCK DIAGRAM
CIRCUIT BOARD LAYOUT& WIRING
OVERALL CIRCUIT DIAGRAM

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YAMAHA

IMPORTANT NOTICE

This manual has been provided for the use of authorized Yamaha Retailers and their service personnel. It has been assumed that basic service procedures inherent to the industry, and more specifically Yamaha Products, are already known and understood by the users, and have therefore not been restated.

WARNING : Failure to follow appropriate service and safety procedures when servicing this product may result in personal injury, destruction of expensive components and failure of the product to perform as specified. For these reasons, we advise all Yamaha product owners that all service required should be performed by an authorized Yamaha Retailer or the appointed service representative.

IMPORTANT : This presentation or sale of this manual to any individual or firm does not constitute authorization certification, recognition of any applicable technical capabilities, or establish a principal-agent relationship of any form.

The data provided is believed to be accurate and applicable to the unit(s) indicated on the cover. The research engineering, and service departments of Yamaha are continually striving to improve Yamaha products. Modifications are, therefore, inevitable and changes in specification are subject to change without notice or obligation to retrofit. Should any discrepancy appear to exist, please contact the distributor's Service Division.

WARNING : Static discharges can destroy expensive components. Discharge any static electricity your body may have accumulated by grounding yourself to the ground bus in the unit (heavy gauge black wires connect to this bus.)

IMPORTANT : Turn the unit OFF during disassembly and parts replacement. Recheck all work before you apply power to the unit.

WARNING: This product contains chemicals known to the State of California to cause cancer, or birth defects or other reproductive harm.

DO NOT PLACE SOLDER, ELECTRICAL/ELECTRONIC OR PLASTIC COMPONENTS IN YOUR MOUTH FOR ANY REASON WHAT SO EVER!

Avoid prolonged, unprotected contact between solder and your skin! When soldering, do not inhale solder fumes or expose eyes to solder/flux vapor!

If you come in contact with solder or components located inside the enclosure of this product, wash your hands before handling food.

WARNING

Components having special characteristics are marked ⚠ and must be replaced with parts having specification equal to those originally installed.

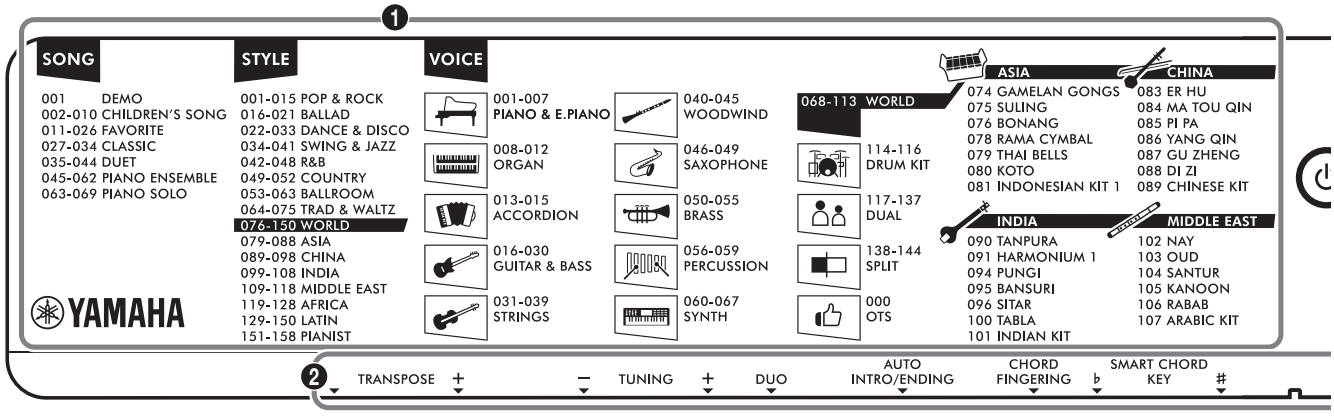
■ SPECIFICATIONS

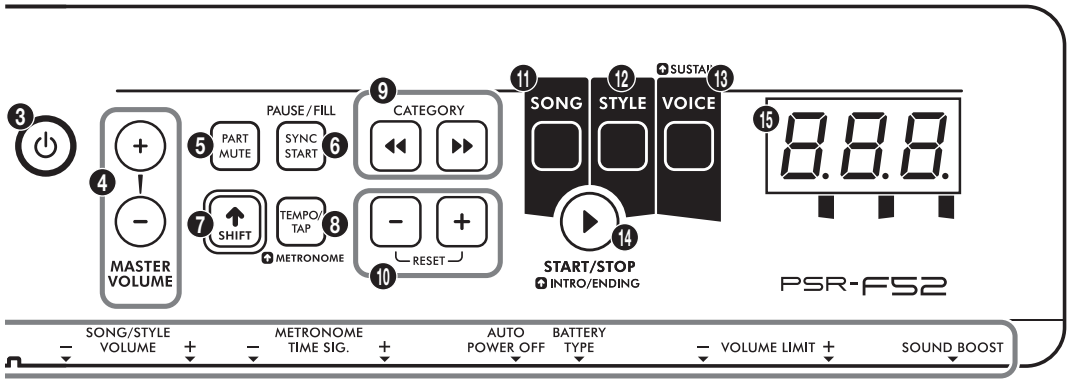
Product Name	Digital keyboard
Dimensions (W x D x H)	920 mm x 266 mm x 73 mm (36-1/4" x 10-1/2" x 2-7/8")
Weight	2.8 kg (6 lb, 3 oz) (not including batteries)
Keyboard	61 standard-size key
Display	7-Segment LED
Panel Language	English
Voices	• Preset: 136 Voices + 8 Drum Kits (including 5 World Drum Kits) • Polyphony (max.): 32 • One Touch Setting (OTS): Yes
Effects	• Panel Sustain: Yes
Accompaniment Styles	• Preset: 158 • Fingering: Smart Chord, Multi Finger • Auto Intro/Ending function: Yes
Songs (MIDI data only; audio not supported.)	Preset: 69 (including 1 Demo Song)
Function	• Metronome: Yes • Duo: Yes • Tempo Range: 11 – 280 (32 – 280, Tap Tempo) • Transpose: -12 – 0 – +12 • Tuning: 427.0 – 440.0 – 453.0 Hz (approx. 0.2 Hz increments) • Sound Boost: Yes • Volume Limit: Yes

Connectivity	• DC IN: 12 V • Headphones/Output: Stereo mini jack (PHONES/OUTPUT)
Amplifiers	2.5 W × 2
Speakers	8 cm x 2
Power Supply	• AC Adaptor: PA-130 or an equivalent recommended by Yamaha (Output: DC 12V, 0.7 A or 1.0 A) • Batteries: Six "AA" size alkaline (LR6), manganese (R6) or Ni-MH rechargeable (HR6) batteries
Power Consumption	6 W (When using PA-130B AC adaptor)
Auto Power Off	Yes (time is adjustable)
Included Accessories	• Owner's Manual • Online Member Product Registration • Music Rest • AC adaptor* (PA-130 or an equivalent recommended by Yamaha) * May not be included depending on your particular area. Please check with your dealer.
Separately Sold Accessories (May not be available depending on your area.)	• AC adaptor: Users within U.S or Europe: PA-130 or an equivalent recommended by Yamaha Others: PA-3C, PA-130 or an equivalent • Headphones: HPH50/HPH-100/HPH-150

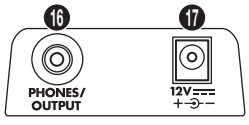
■ PANEL LAYOUT

● Front Panel





● Rear Panel



❶ Song/Style/Voice Categories
❷ Functions
❸ [⏻](Standby/On) switch
❹ MASTER VOLUME buttons
❺ [PART MUTE] button
❻ [SYNC START] button
❼ [SHIFT] button
❽ [TEMPO/TAP] button
❾ CATEGORY buttons
❿ [+]/[-] button
⓫ [SONG] button
⓬ [STYLE] button
⓭ [VOICE] button
⓮ [START/STOP] button
⓯ DISPLAY
⓰ [PHONES/OUTPUT] jack
⓱ DC IN jack

■ DISASSEMBLY PROCEDURE

1. Lower Case Assembly

(Time required: About 3 minutes)

1-1 Remove the five (5) screws marked [110] and seven (7) screw marked [100]. (Fig.1)

1-2 The lower case assembly can then be removed. (Fig.1)

● **Bottom view**

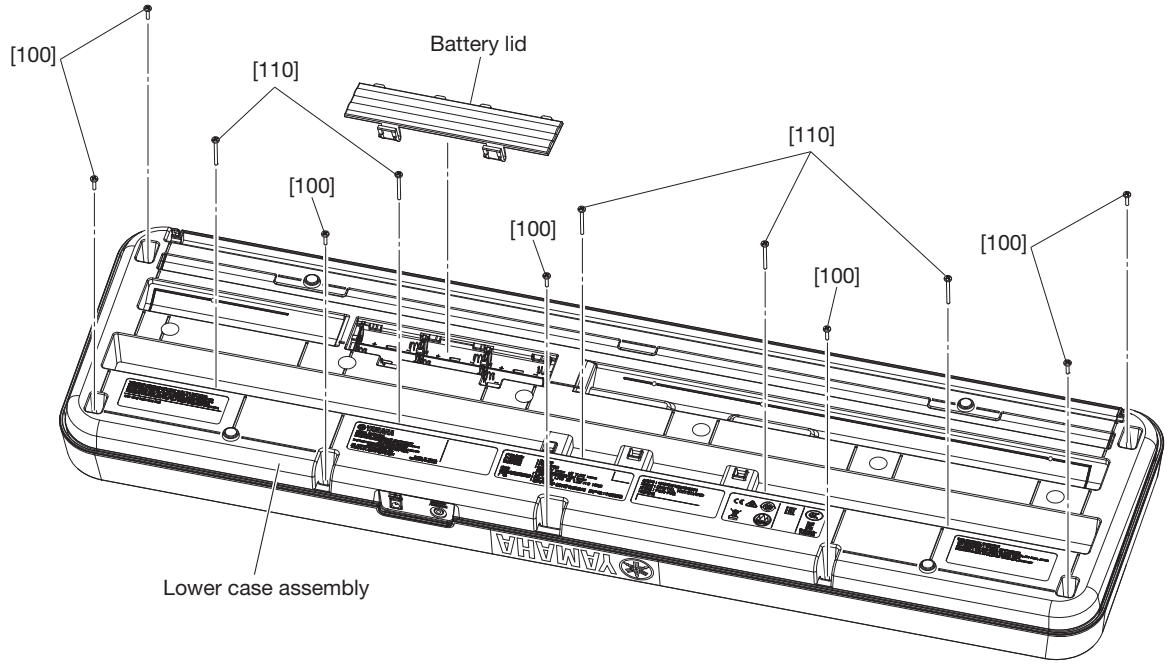


Fig.1

2. PN Circuit Board
(Time required: About 5 minutes)

2-1 Remove the lower case assembly. (See procedure 1.)

2-2 Remove the eight (8) screws marked [60A]. The PN circuit board can then be removed. (Fig.2)

3. Speaker L,R
(Time required: About 4 minutes)

3-1 Remove the lower case assembly. (See procedure 1.)

3-2 Remove the four (4) screws marked [60B]. The speaker can then be removed. (Fig.2)

* ***The Speaker L and R can be removed in the same manner.***

* ***Tighten the screws in the order of 1 ,2 ,3 ,4 or 1 ,4 ,3 ,2.***

* ***Put the speaker through the holes.***

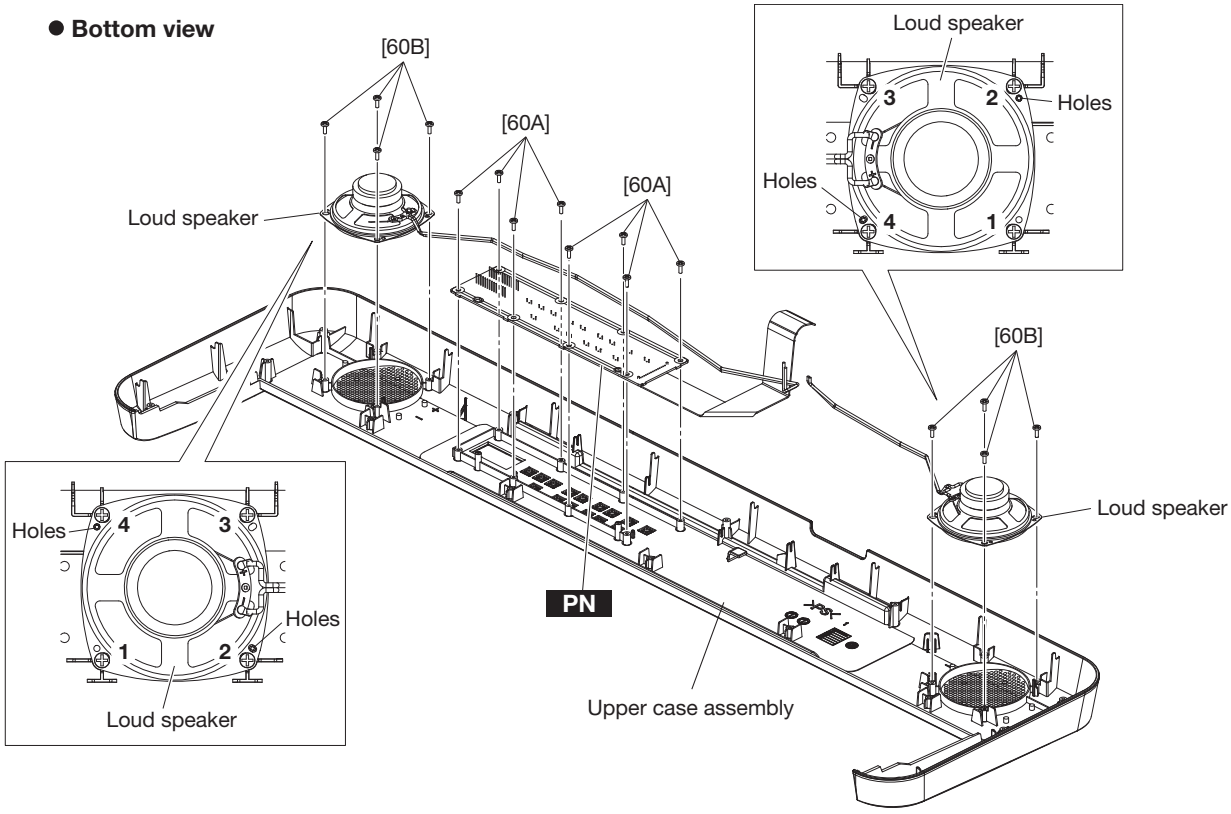


Fig.2

4. DM Circuit Board
(Time required: About 4 minutes)

4-1 Remove the lower case assembly. (See procedure 1.)

4-2 Remove the three (3) screws marked [110A]. The DM circuit board can then be removed (Fig.3)

5. AM Circuit Board
(Time required: About 4 minutes)

5-1 Remove the lower case assembly. (See procedure 1.)

5-2 Remove the five (5) screws marked [110B]. The AM circuit board can then be removed (Fig.3)

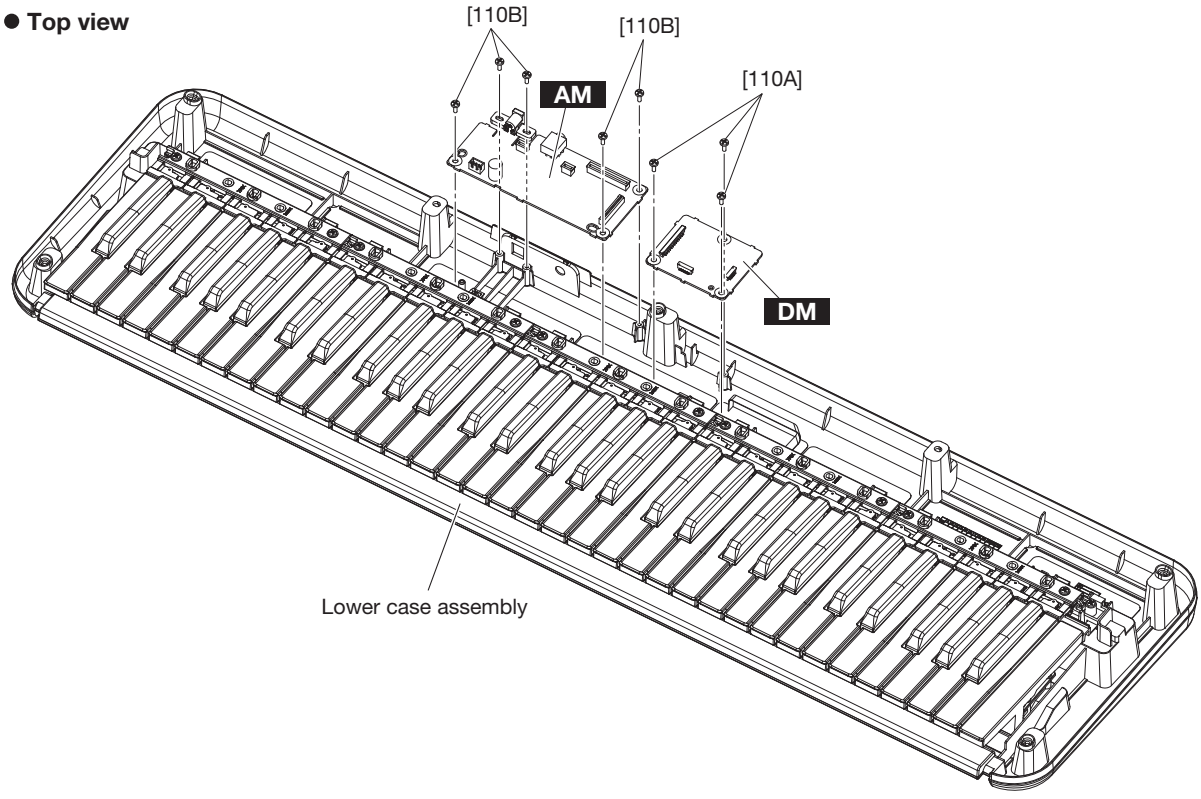


Fig.3

6. Disassembling Keyboard Assembly

6-1 Remove the lower case assembly. (See procedure 1.)

6-2 White Keys and Black Keys

(Time required: About 9 minutes)

White and black keys for one octave unit are integrated as a set. There are five sets in total. Only the C6 white key, unlike the other keys, is not integrated in a set. (Fig.4)

6-2-1 To remove a set, remove the two (2) each screws marked [110A]. The white and black keys in the set can then be removed. (Fig.4)

When removing, unfasten the two (2) hooks at the back of the black keys upward, and lift the white and black keys while pulling them toward you a little. (Photo.1)

6-2-2 To remove the white key C6, remove the screw marked [110B], unhook as described in Procedure 6-2-1, and pull out toward you. (Fig.4)

* ***When all white and black keys were removed, first attach the white and black keys from C3 to B3 aligning them with the boss, and then attach the remaining white and black keys. (Fig.4)***

* ***Tighten the screws in the order of 1 to 11.***

● **Top view**

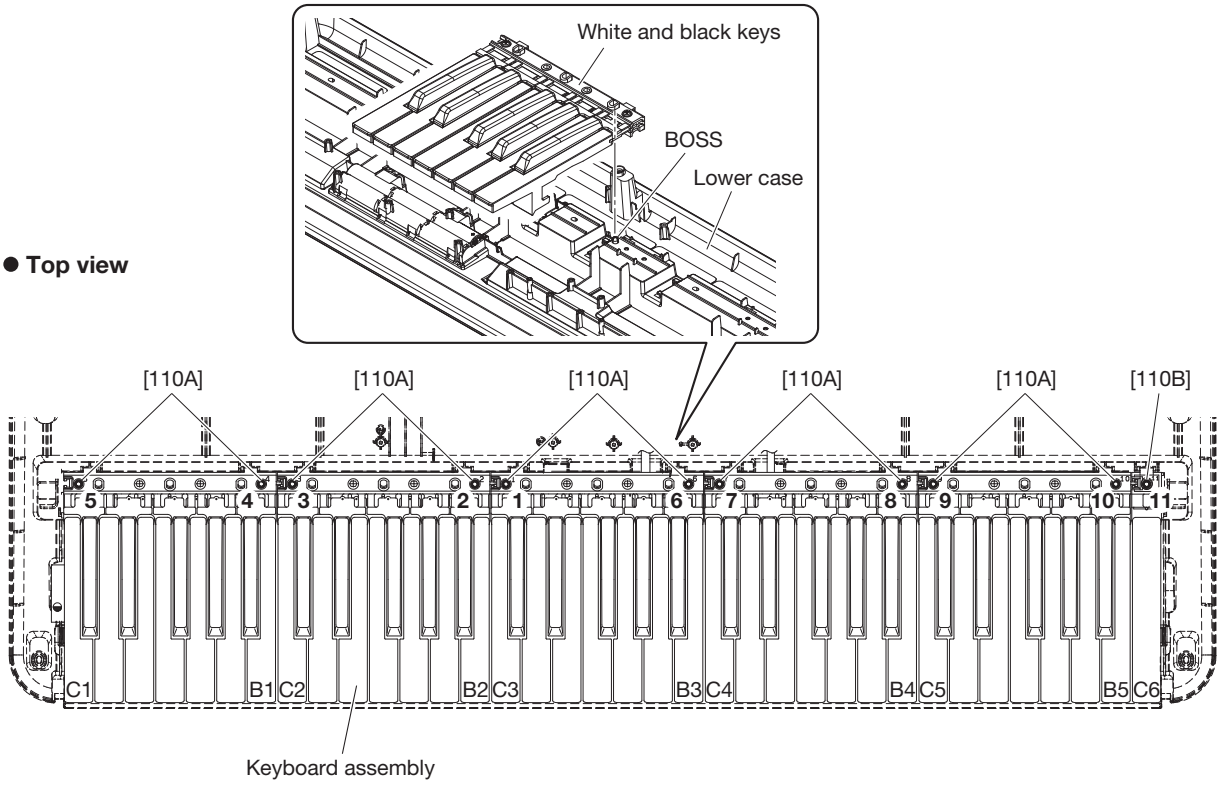


Fig.4

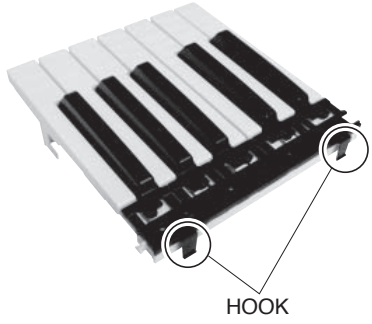


Photo.1

6-3 Rubber Contact

(Time required: About 10 minutes)

6-3-1 Remove the white and black keys corresponding to the rubber contacts to be removed. (See Fig.4 and Procedure 6-2)

6-3-2 Remove the rubber contacts. (Fig.5)

● **Top view**

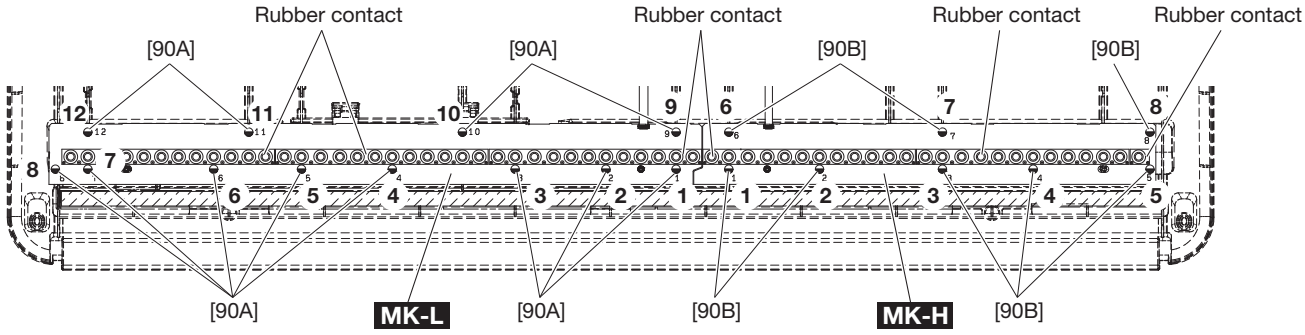


Fig.5

6-4 MK-L Circuit Board

(Time required: About 8 minutes)

6-4-1 Remove the white and black keys from C1 to B3. (See Fig.4 and Procedure 6-2)

6-4-2 Remove the twelve (12) screws marked [90A]. The MK-L circuit board can then be removed. (Fig.5)

* ***When installing the MK-L circuit board, tighten the screws 1 through 12 in numerical order. (Fig.5)***

6-5 MK-H Circuit Board

(Time required: About 8 minutes)

6-5-1 Remove the white and black keys from C4 to C6. (See Fig.4 and Procedure 6-2)

6-5-2 Remove the eight (8) screws marked [90B]. The MK-H circuit board can then be removed. (Fig.5)

* ***When installing the MK-H circuit board, tighten the screws 1 through 8 in numerical order. (Fig.5)***

7. How to Remove Battery Terminals

7-1 Battery Terminal A and Battery Terminal B
(Time required: About 12 minutes)

7-1-1 Remove the lower case assembly. (See procedure 1.)
7-1-2 Remove the white keys and black keys from C1 to B3. (See Section 6-2)
7-1-3 Remove the MK-L circuit board. (See procedure 6-4-2)
7-1-4 Remove the battery connector assembly soldered to the battery terminal A and battery terminal B. (Fig.6)
7-1-5 Remove the hook for the battery terminal A to pull it. (Fig.6)
7-1-6 Remove the battery lid assembly. (Fig.1)
7-1-7 Remove the hook for the battery terminal B to pull it. (Fig.7)

7-2 Battery Terminal C and Battery Terminal D
(Time required: About 2 minutes)

7-2-1 Remove the battery lid assembly. (Fig.1)
7-2-2 Remove the hooks to pull out the spring terminal C and spring terminal D. (Fig.7)

● **Top view**

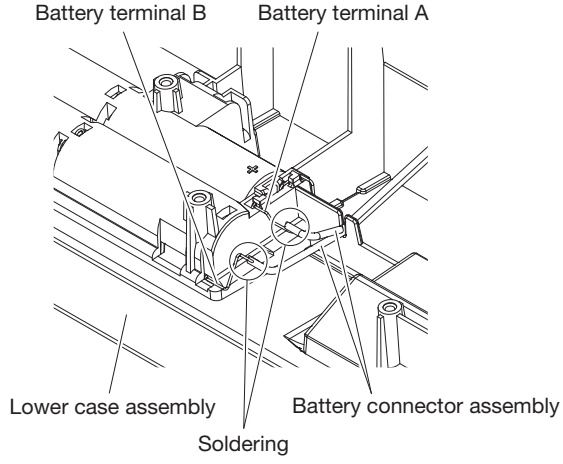


Fig.6

● **Bottom view**

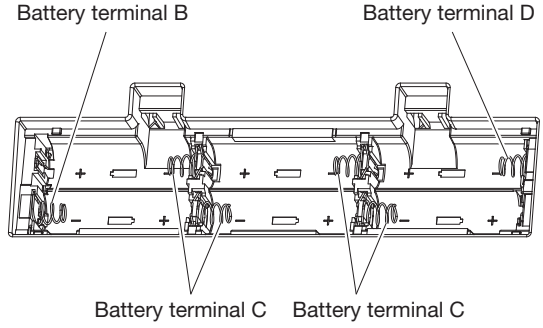


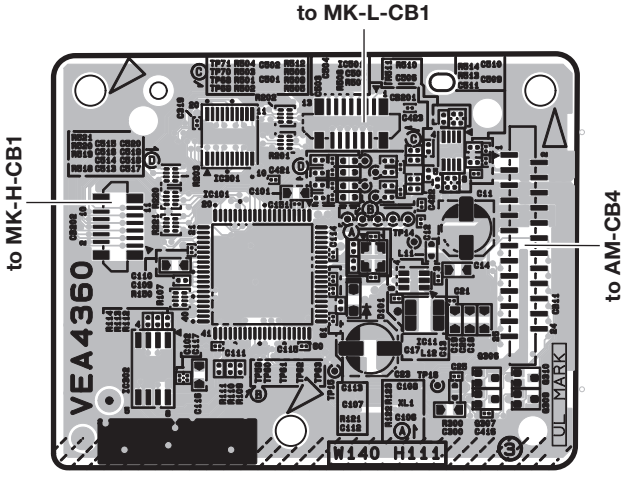
Fig.7

■ CIRCUIT BOARDS

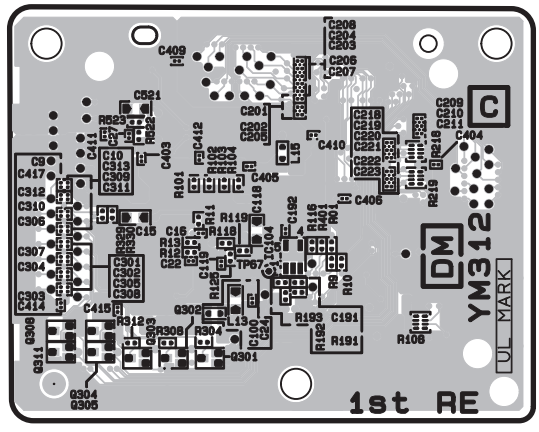
- **DM Circuit Board** (YM312C0) 11
- **AM Circuit Board** (YM313C0) 12
- **PN Circuit Board** (YM313C0) 13/14
- **MK-H Circuit Board** (YM241C0)..... 15/16
- **MK-L Circuit Board** (YM240C0) 17/18

Note: See parts list for details of circuit board component parts.

● DM Circuit Board



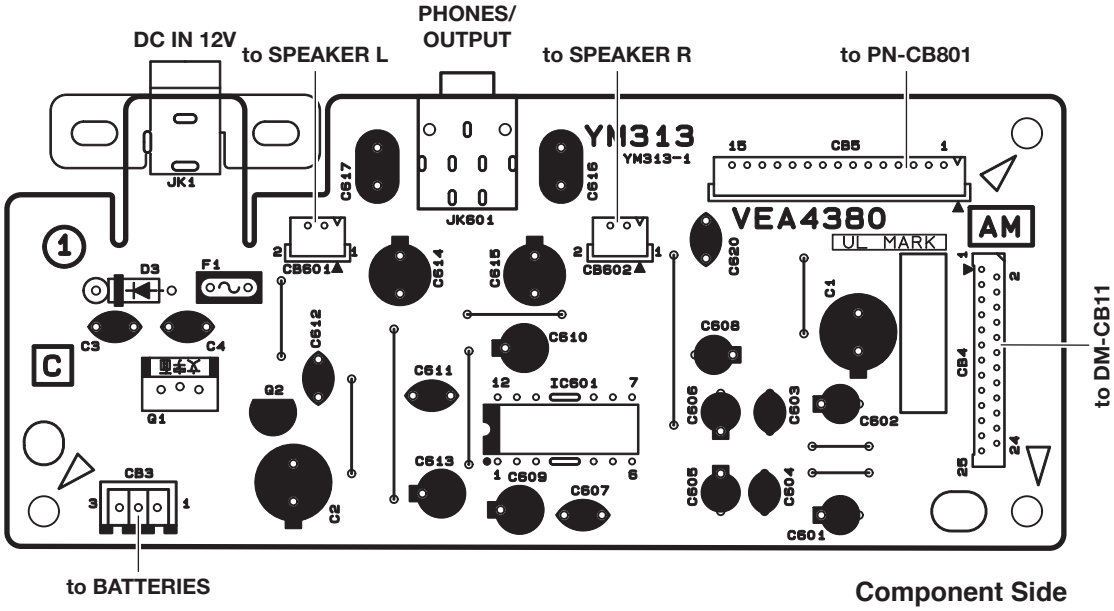
Component Side

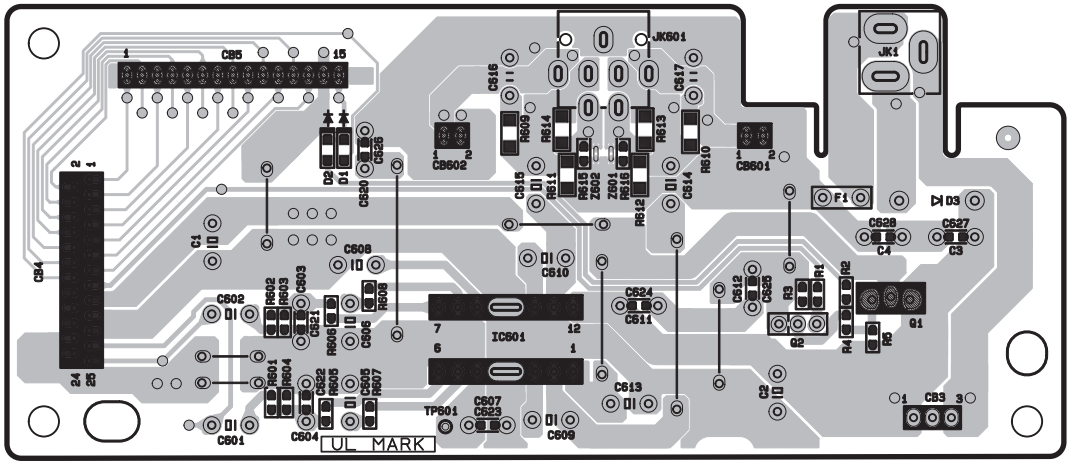


Pattern Side

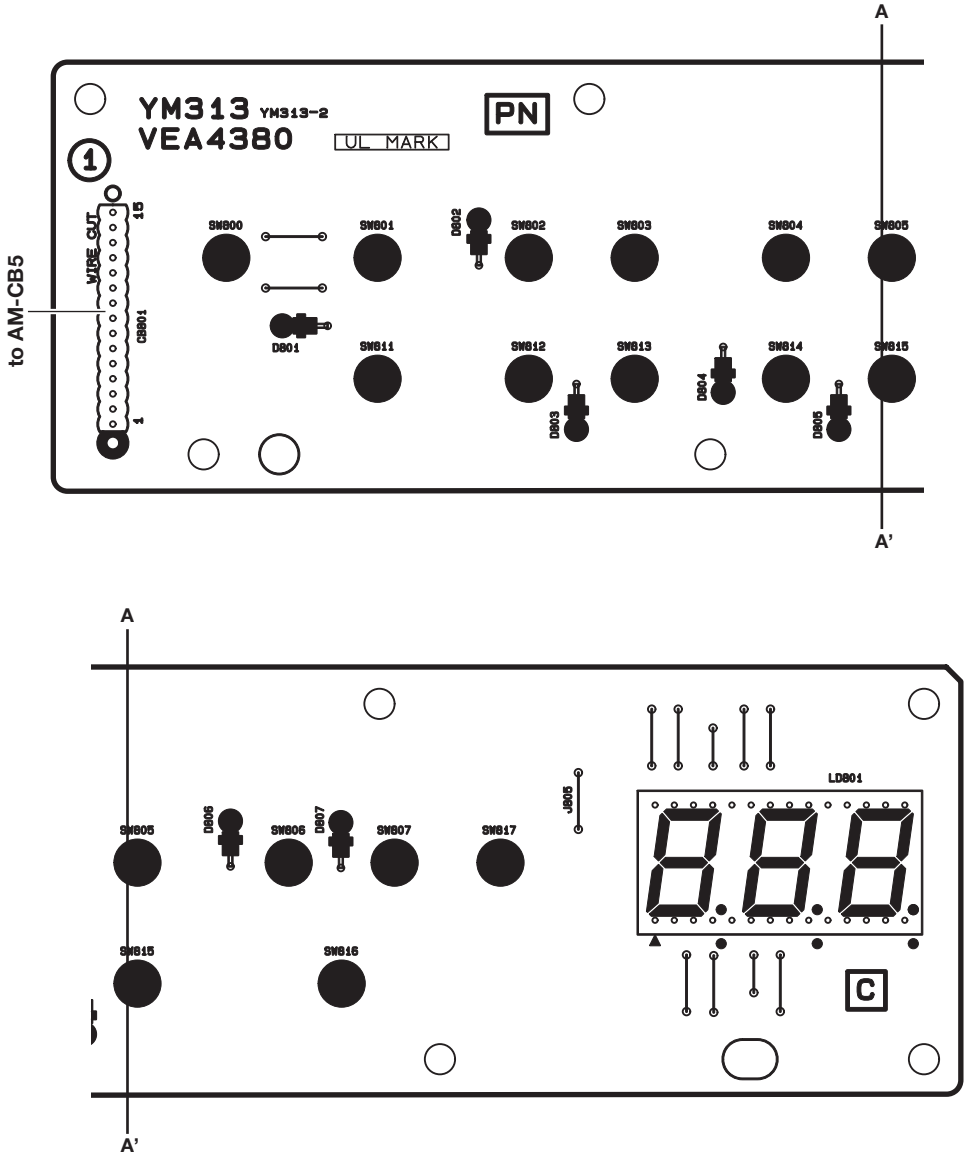
2NA-VEA4360 /1

• AM Circuit Board





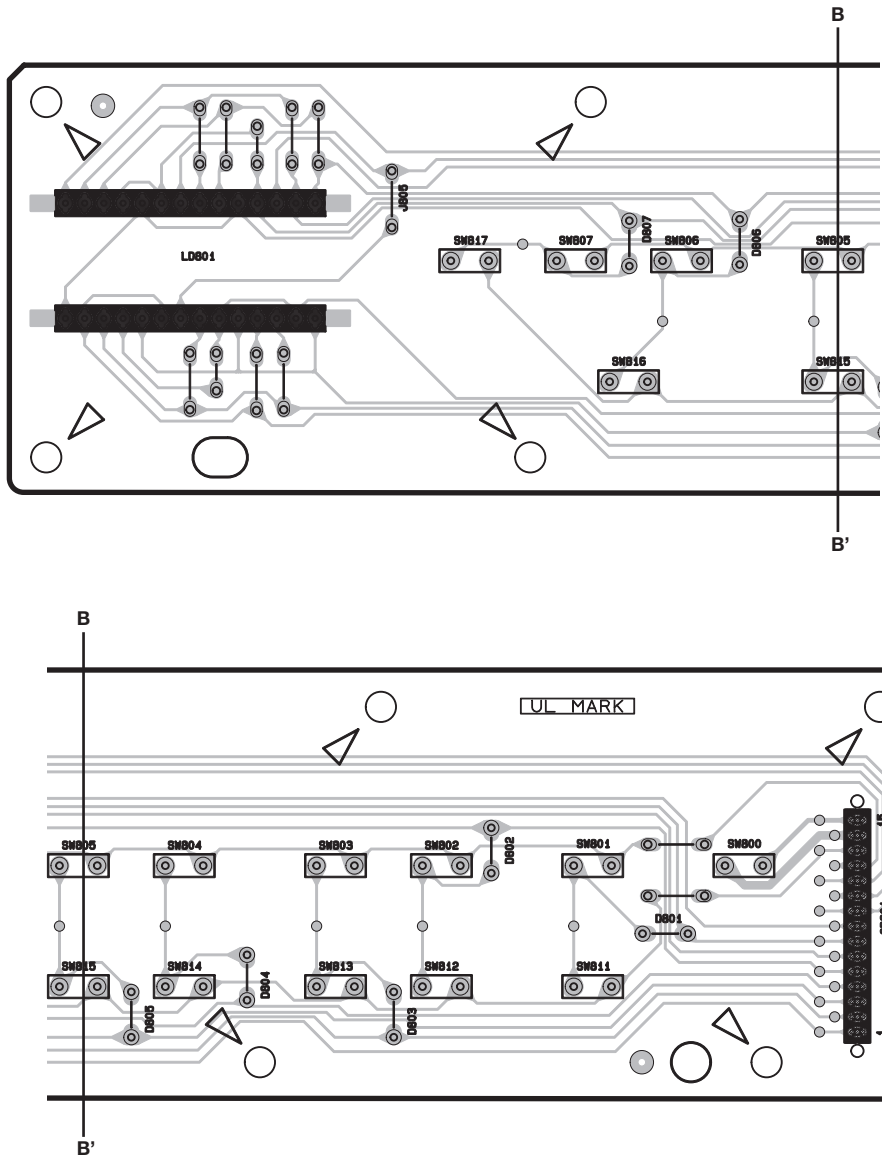
• PN Circuit Board



Component Side

2NA-VEA4360 ⚠1

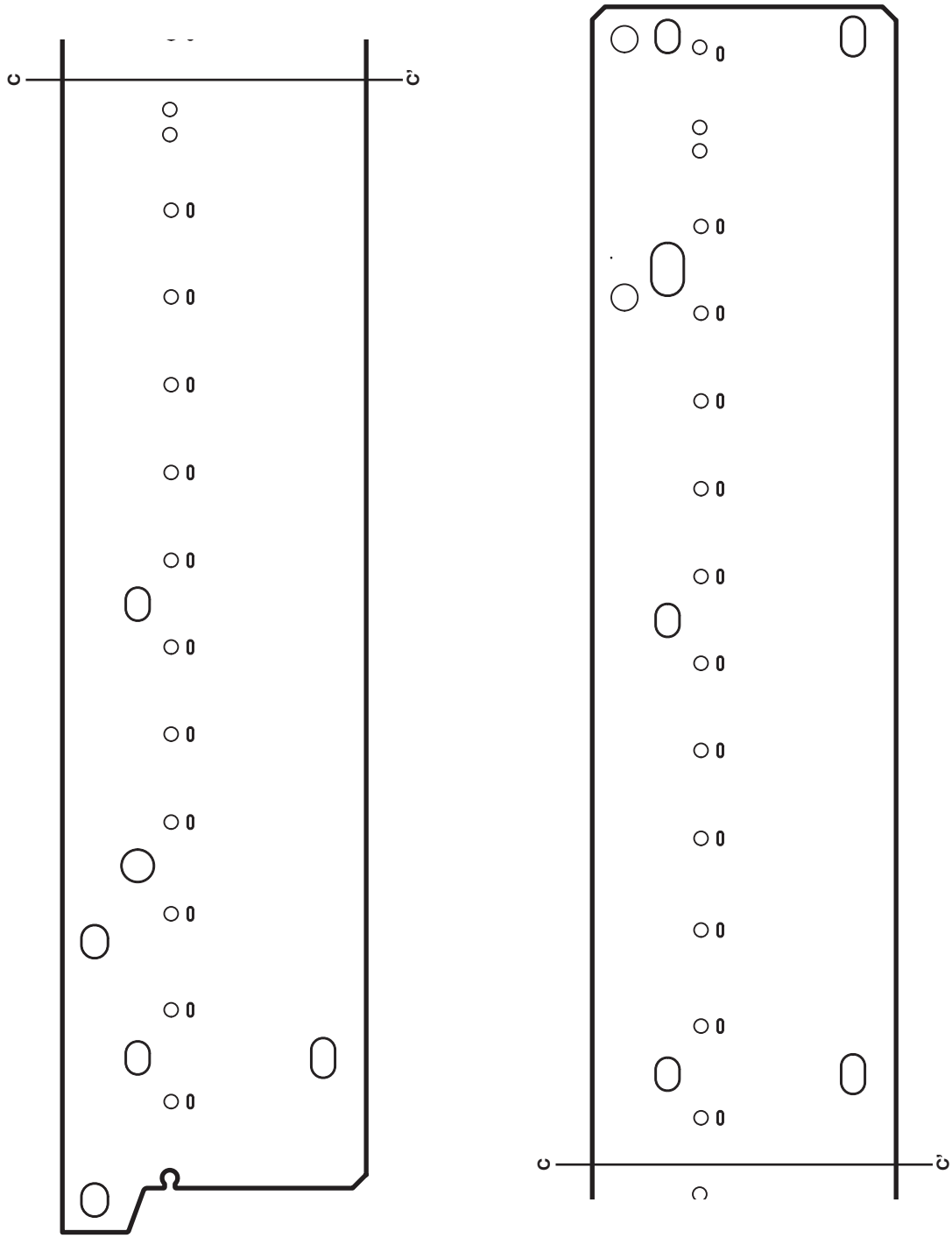
• PN Circuit Board



Pattern Side

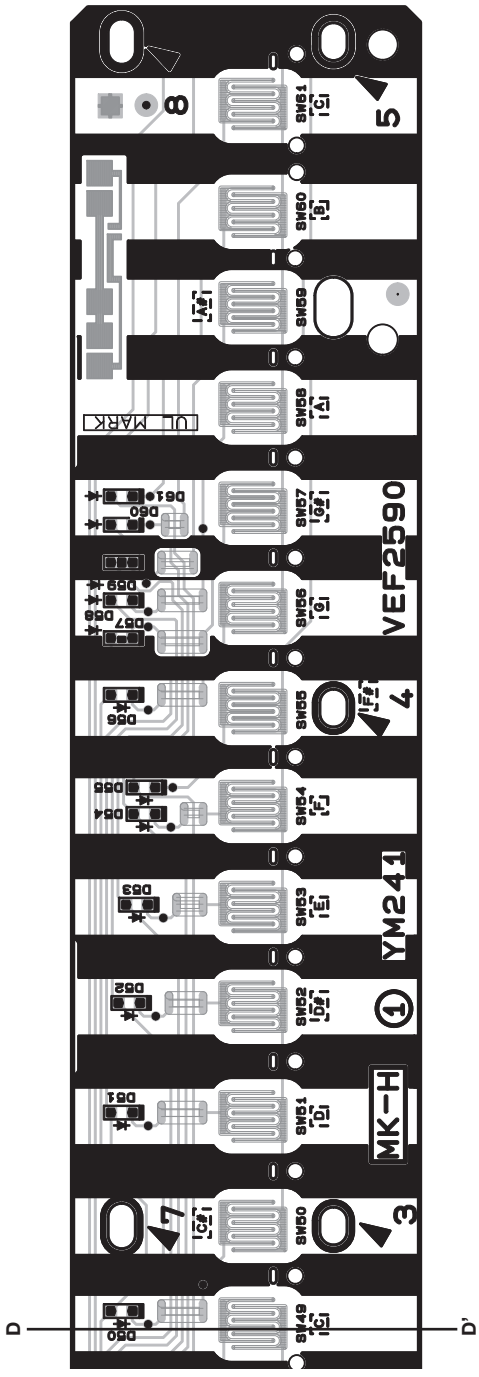
2NA-VEA4380 1

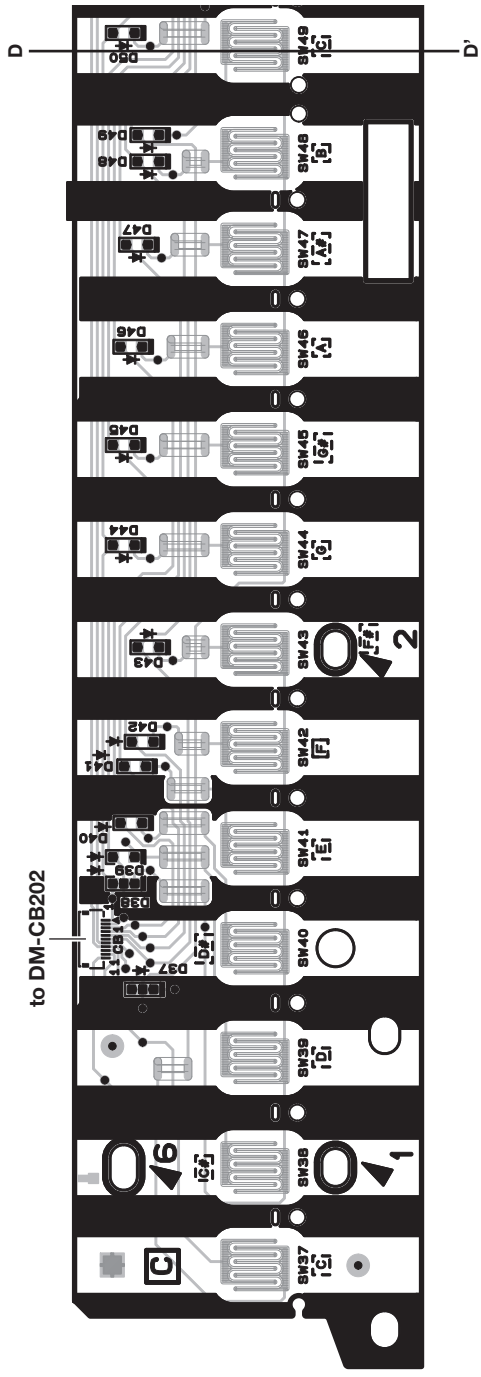
• MK-H Circuit Board



Component Side

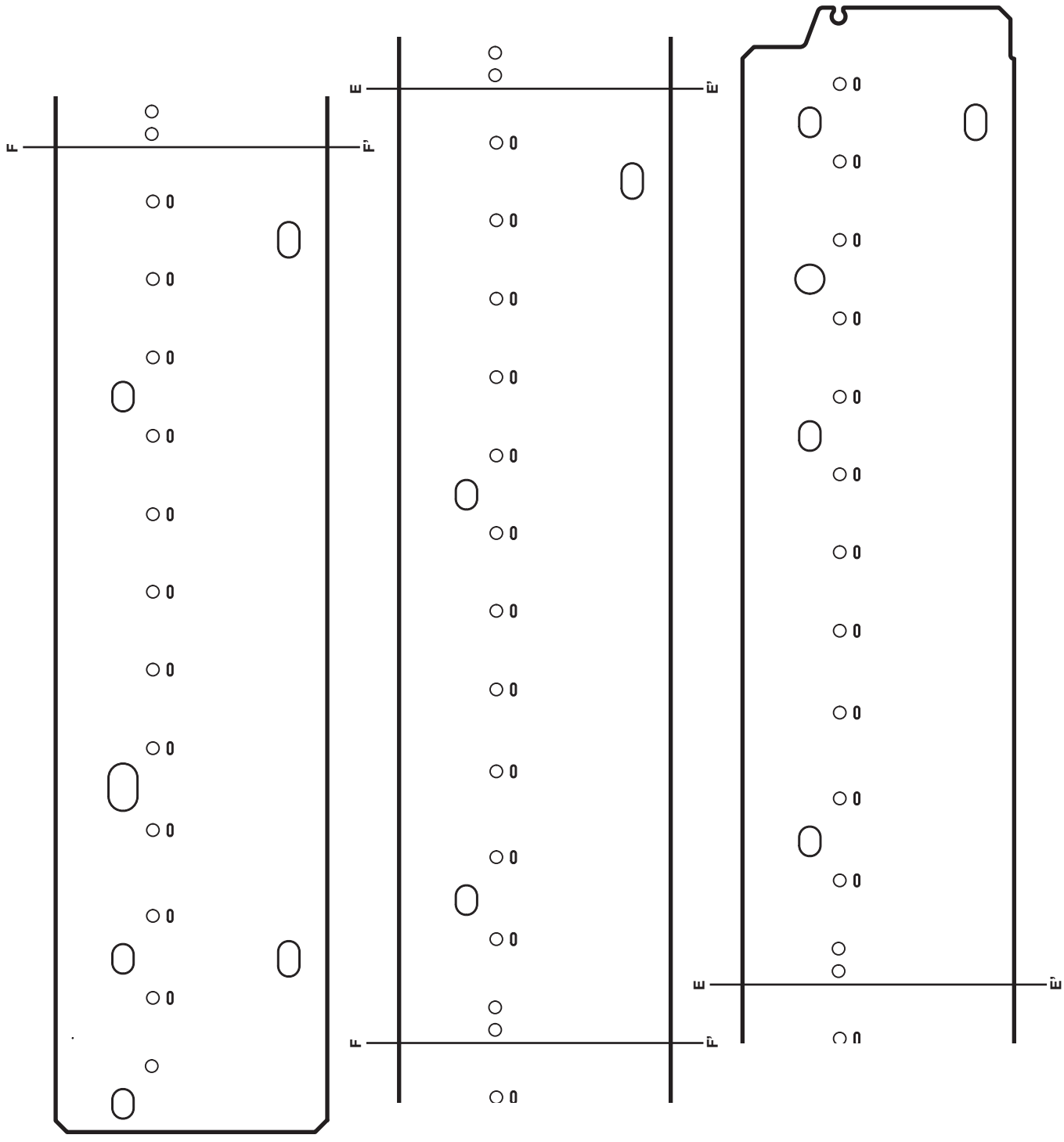
• MK-H Circuit Board





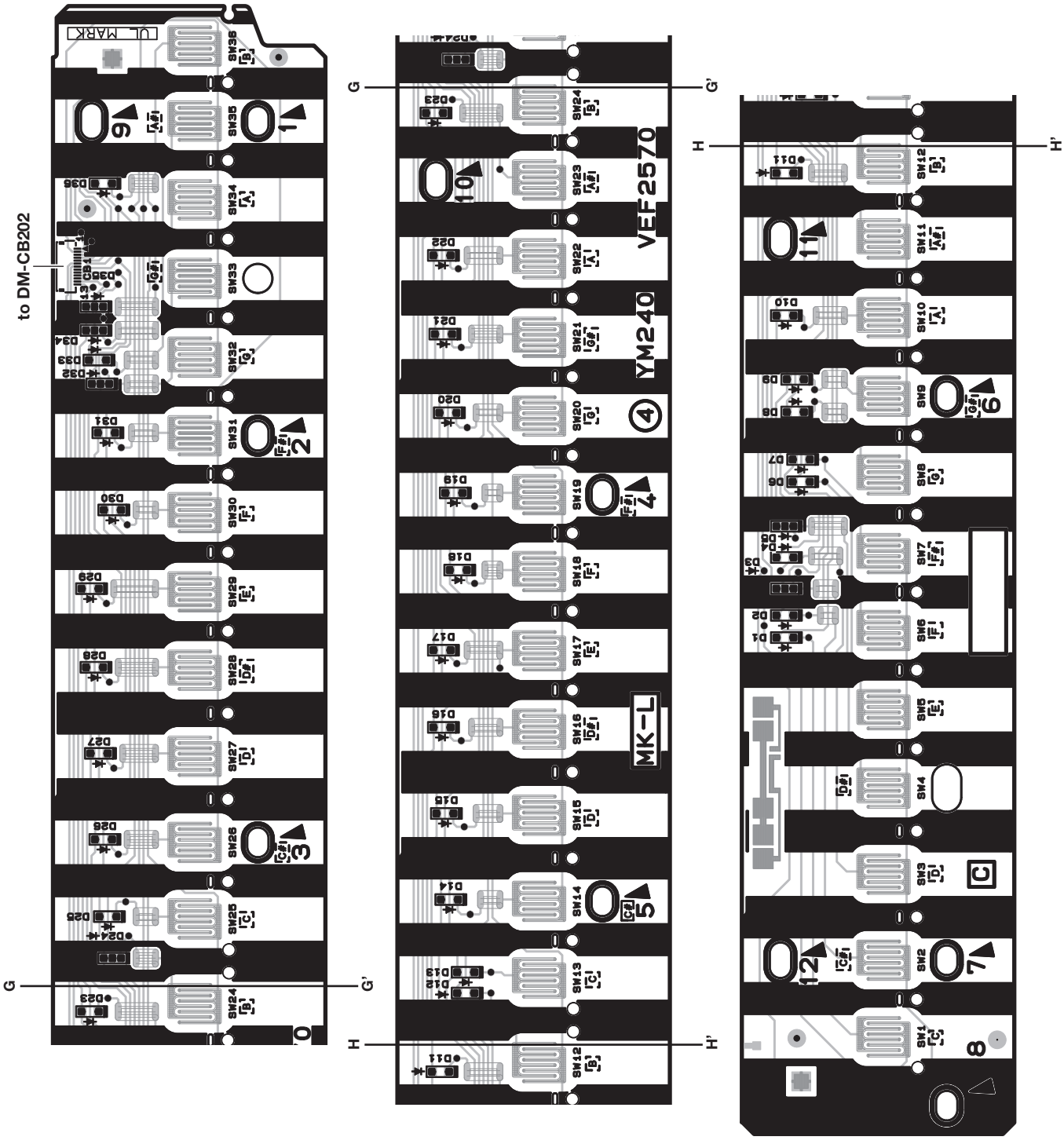
Pattern Side

• MK-L Circuit Board



Component Side

• MK-L Circuit Board



Pattern Side

TEST PROGRAM

1 Measurement conditions

1-1. Inspection environment

Perform tests under the following conditions.

- Normal temperature (5°C to 40°C)
- Normal humidity (20°C to 90 %)

If the test results do not meet the specifications, check again the tests under such conditions as the normal temperature (5°C to 40°C) and normal humidity (30% to 90% relative humidity).

1-2. Power voltage

- Use the PA-3C or PA-130B for the AC adaptor unless otherwise specified.
- The AC power should be 50Hz or 60Hz and the capacity should be 500VA or more. The voltage should be ±10% of the rating voltage of the adaptor being used.
- The DC power source used in place of batteries should be 9V capacity, with at least 2A current, and internal resistance of 200mΩ or less.

1-3. Measuring instrument

Use a reliable measuring device capable of carrying out measurement precision values indicated by the specifications set forth in this document.

- Level meter (using a JIS-C filter)
- Frequency meter (should be capable of measuring to three or more decimal places)
- Measuring instruments with greater than 1MΩ input impedance.

1-4. Terminal conditions

Measure the values at the PHONES jack by using a stereo plug unless otherwise specified.
PHONES: Install a stereo plug (L/R channels: 33Ω load)

1-5. Control conditions

Unless otherwise specified, the standard state for the unit undergoing testing is power-ON with the unit set to its default (factory) settings.

1-6. Measurement unit

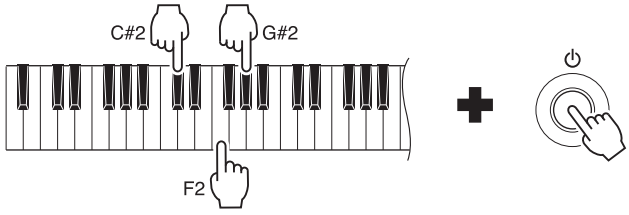
Voltage unit: 0 dBu = 0.775 Vrms

2 Executing the test program

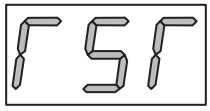
There are two methods to start up the Test mode, Manual and Auto.

▪ Manual mode

1) Start the Test mode in manual mode.
While simultaneously holding down keys [C#2], [F2] and [G#2] (a C#2 major chord), turn on the [⏻] (Standby/On) switch.



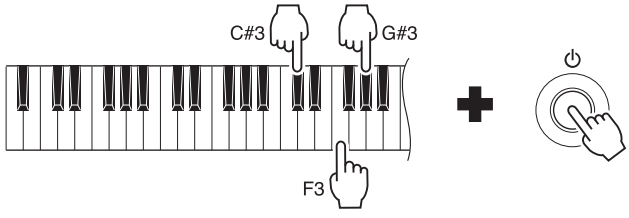
2) When the Test mode is started successfully, **"TST"** appears on the LCD.



3) Press the [+]/[-] to select a test item.
4) Press the [START/STOP] to execute the test.
The display of the test results varies depending on each test item. For the detailed behavior of each test item, refer to the **"Test Program Item List"** on page 21.
5) Press the [START/STOP] to exit the test item.
For test items T01 to T60, a period is displayed after each letter when the test is completed or passed, such as "**T.x.x.**".

▪ Auto mode

1) Start the Test mode in auto mode.
While simultaneously holding down keys [C#3], [F3] and [G#3] (a C#3 major chord), turn on the [⏻] (Standby/On) switch.

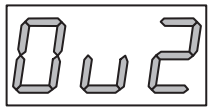
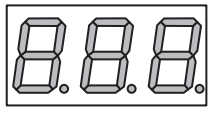


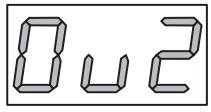
2) When the Test mode is started successfully, **"TST"** is shown on the display.

3) Press the [START/STOP] to execute sequentially from **"Auto mode"** columns 1 to 7 in the **"Test Program Item List"** on page 21.
At the beginning, the Main program version of T01 is displayed automatically.
4) When a test item is finished by pressing [START/STOP], the next item will start automatically. For the detailed behavior of each test item, refer to the **"Test Program Item List"** on page 21.
* To cancel each test, press the [PART MUTE] button or the lowest key (C1) to return to the item selection display.
5) At the end, **"T062: Test Mode Exit"** is executed.
Operation exits from the test program, and the system is reset and changes to the play mode.

3. **Test Program Item List**

<table>
<tr><th>No.</th><th>Test Program Item</th><th>Procedure for "Selection and execution of test items"</th><th>Auto mode</th></tr>
<tr><td>T01</td><td>ROM Version</td><td>Indicates the version of each firmware.
1) Press the following buttons to call up the corresponding versions on the display.
CATEGORY [>>]: Main program version
CATEGORY [<<]: Boot program version
[STYLE]: Style data version
[SONG]: Song data version
[VOICE]: Voice parameter version
[SYNC START]: Wave data version
The ROM version is managed with Main.
Since the Main program version is linked to the others' versions, you can just check the Main version to confirm the update.
2) Each result is displayed as follows.
▪ Normal condition:
<table><tr><th>Item</th><th>Text indication</th></tr><tr><td>All items</td><td>x.xx (Version number)</td></tr></table>▪ In case of failure:
<table><tr><th>Item</th><th>Text indication</th></tr><tr><td>Main program version</td><td>AnG</td></tr><tr><td>Boot program version</td><td>enG</td></tr><tr><td>Style data version</td><td>FnG</td></tr><tr><td>Song data version</td><td>gnG</td></tr><tr><td>Voice parameter version</td><td>hnG</td></tr><tr><td>Wave data version</td><td>CnG</td></tr></table></td><td>1</td></tr>
<tr><td>T09</td><td>Pitch Precision Check</td><td>Checks pitch accuracy.
1) Connect a frequency meter to the [PHONES/OUTPUT] jack (either L or R).
2) Pressing the [START/STOP] button produces a sine wave and "Plt" is shown on the display.
3) Confirm that the correct signal is output.
441.0 Hz +/- 0.2 Hz</td><td></td></tr>
<tr><td>T11</td><td>Output Level R</td><td>Measures the level of the sound panned to right to confirm that it sounds at the proper level.
1) Connect a level meter (with JIS-C filter) to the [PHONES/OUTPUT] jack.
2) Pressing the [START/STOP] button produces a sine wave is produced and "OPr" is shown on the display.
3) Check the output level.
<table><tr><th>Jack</th><th>Criteria</th></tr><tr><td>OUTPUT R</td><td>-12.5 +/- 2 dBu</td></tr><tr><td>OUTPUT L</td><td>-53 dBu or less</td></tr></table></td><td>2</td></tr>
<tr><td>T12</td><td>Output Level L</td><td>Measures the level of the sound panned to left to confirm that it sounds at the proper level.
1) Connect a level meter (with JIS-C filter) to the [PHONES/OUTPUT] jack.
2) Pressing the [START/STOP] button produces a sine wave is produced and "OPL" is shown on the display.
3) Check the output level.
<table><tr><th>Jack</th><th>Criteria</th></tr><tr><td>OUTPUT L</td><td>-12.5 +/- 2 dBu</td></tr><tr><td>OUTPUT R</td><td>-53 dBu or less</td></tr></table></td><td>3</td></tr>
</table>

<table>
<tr><th>No.</th><th>Test Program Item</th><th>Procedure for "Selection and execution of test items"</th><th>Auto mode</th></tr>
<tr><td>T23</td><td>SW Check</td><td>Confirms that the switches on the panel work properly.
1) Press the switch according to the switch number shown on the display. While a switch is pressed, the sound corresponding to each switch is played.
During the test, the switch number is displayed as “S**.” Refer to the table below for the switch names, display and notes.
<table>
<tr><th>Display</th><th>Switch name</th><th>Note</th></tr>
<tr><td>S01</td><td>MASTER VOLUME +</td><td>C3</td></tr>
<tr><td>S02</td><td>PART MUTE</td><td>C#3</td></tr>
<tr><td>S03</td><td>SYNC START</td><td>D3</td></tr>
<tr><td>S04</td><td><<</td><td>D#3</td></tr>
<tr><td>S05</td><td>>></td><td>E3</td></tr>
<tr><td>S06</td><td>SONG</td><td>F3</td></tr>
<tr><td>S07</td><td>STYLE</td><td>F#3</td></tr>
<tr><td>S08</td><td>VOICE</td><td>G3</td></tr>
<tr><td>S09</td><td>MASTER VOLUME -</td><td>G#3</td></tr>
<tr><td>S10</td><td>SHIFT</td><td>A3</td></tr>
<tr><td>S11</td><td>TEMPO/TAP</td><td>A#3</td></tr>
<tr><td>S12</td><td>-</td><td>B3</td></tr>
<tr><td>S13</td><td>+</td><td>C4</td></tr>
<tr><td>S14</td><td>START/STOP</td><td>C#4</td></tr>
</table>
* If two or more switches are pressed at a time, “Ov2” (“Over 2”) is displayed.
 
2) Confirm that “PAS” is displayed on the display when all the switches are pressed as indicated.
* To cancel the in-process test, press the [PART MUTE] button when something other than “S04” is shown to return to the item selection display. “T23” is shown on the display.</td><td>5</td></tr>
<tr><td>T24</td><td>All LED ON</td><td>Confirm that all LEDs turn on.
  </td><td>4</td></tr>
<tr><td>T45</td><td>Volt Check</td><td>With the AC adaptor in use, this confirms whether the voltage supply is proper or not (1.57V or higher).
1) Connect an AC adaptor to the DC-IN jack.
2) Press the [START/STOP] button to execute the voltage check.
“-45” is displayed during the test. (The value may not actually appear since the test takes only a moment to complete.)
3) Confirm the result.
▪ Normal condition:
“PAS” is shown on the display.
▪ In case of failure:
“nG” is shown on the display.</td><td></td></tr>
</table>

No.	Test Program Item	Procedure for "Selection and execution of test items"	Auto mode
T55	**ROM Check 2**	Checks the checksum of the ROM connected to the CPU bus (full address). 1) **"-55"** is displayed during the test. It will take about 10 seconds for the check. 2) Confirm the result. ▪ Normal condition: **"PAS"** is shown on the display. ▪ In case of failure: **"nG"** is shown on the display.	
T57	**Flash ROM Check 2**	Checks if the backup data is erased, written, and read properly. 1) The value **"-57"** is displayed during the test. (The value may not actually appear since the test takes only a moment to complete.) 2) Confirm the result. ▪ Normal condition: **"PAS"** is shown on the display. ▪ In case of failure: **"nG"** is shown on the display.	
T60	**Keyboard Check**	Checks if the keyboard works properly. 1) Press the keys as shown in the display. While a key is pressed, the sine wave of the pitch corresponding to each key is played. * If two or more keys are pressed at a time, **"Ov2" ("Over 2")** is displayed.  2) Confirm that **"PAS"** is displayed on the display when all the keys are pressed as indicated. * To cancel the in-process test, press the [PART MUTE] button. **"T60"** is shown on the display.	**6**
T61	**Factory Set**	Initializes the entire backup area to reset to the factory default, and turns the power off.	
T62	**Test Mode Exit**	Exits from the test program, resets the system and changes to the Play mode. * Do not turn off the power until the Main screen is displayed.	**7**

■ DM Circuit Board Test Method

The DM Circuit Board is provided with test points for service check purposes.
Check the test points on the DM Circuit Board if the following symptoms appear.

Symptoms and check items

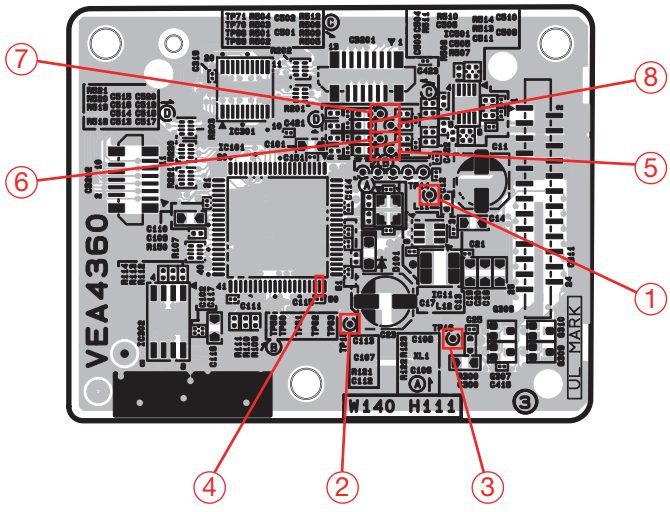
1) No LED display with Power SW ON --> Check items 1 to 4 sequentially
2) No sound or distorted sound --> Check items 5 to 8 sequentially

Table Test Pint List

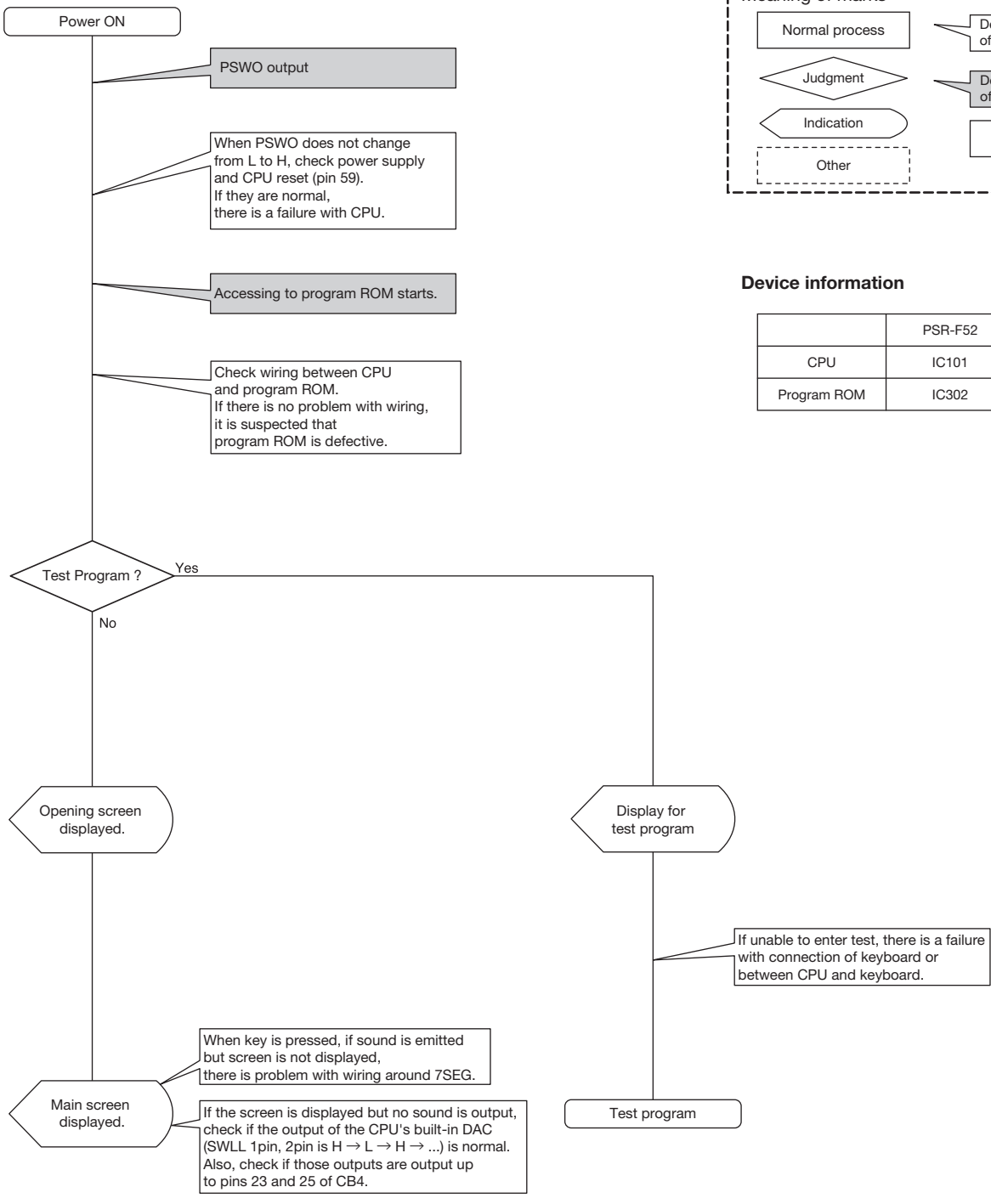
No.	Test Point	Circuit	Judgment criteria	Measured GND	Measured by	Parts with possible defects
①	+V	Power supply for DM circuit board	10.3 ～ 11.3V	DGND	Multimeter	Q1@AM
②	+3.3D	3.3V power for digital circuit	3.0 ～ 3.6V	DGND	Multimeter	IC11
③	+3.3L	3.3V power for LED circuit	3.0 ～ 3.6V	DGND	Multimeter	IC11
④	ICN	CPU reset signal	3.0 ～ 3.6V	DGND	Multimeter	IC11
⑤	DACL+	DAC output L+ channel	2.0 ～ 5.2V	AGND	Signal checker	IC101
⑥	DACL-	DAC output L- channel	2.0 ～ 5.2V	AGND	Signal checker	IC101
⑦	DACR+	DAC output R+ channel	2.0 ～ 5.2V	AGND	Signal checker	IC101
⑧	DACR-	DAC output R- channel	2.0 ～ 5.2V	AGND	Signal checker	IC101

Caution:
・Use the standard AC adaptor PA-130B for check operation.

DM Circuit Board (VEA43600)



■ SYSTEM BOOTING FLOWCHART



Device information

	PSR-F52
CPU	IC101
Program ROM	IC302

DIGITAL KEYBOARD

PSR-F52

PARTS LIST

■ CONTENTS

OVERALL ASSEMBLY 2
UPPER CASE ASSEMBLY 3
LOWER CASE ASSEMBLY..... 4
KEYBOARD ASSEMBLY 5
ELECTRICAL PARTS..... 6

Notes : DESTINATION ABBREVIATIONS

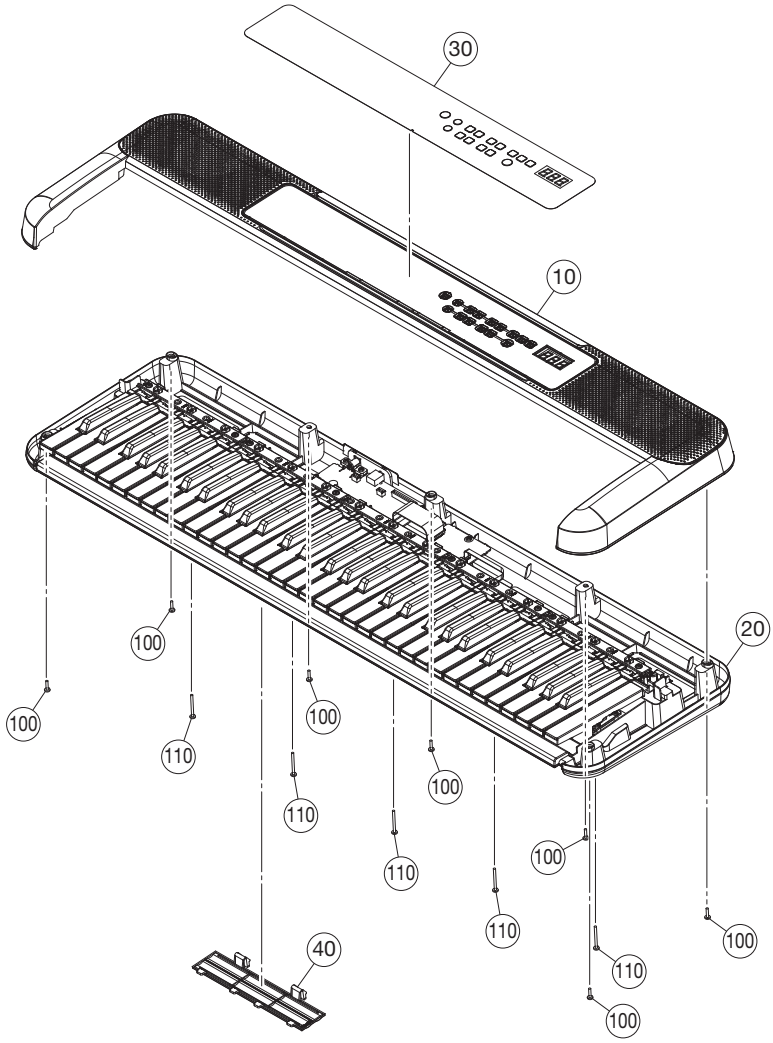
A : Australian model	O : Chinese model
B : British model	P : Brazilian model
C : Canadian model	Q : South-east Asia model
D : German model	T : Taiwan model
E : European model	U : U.S.A. model
F : French model	V : General export model (110V)
H : North European model	W: General export model (220V)
I : Indonesian model	N,X: General export model
J : Japanese model	Y : Export model
K : Korean model	Z : Indian model
M : South African model	

■ WARNING

Components having special characteristics are marked ⚠ and must be replaced with parts having specification equal to those originally installed.

- The numbers “QTY” show quantities for each unit.
- The parts with “--” in “PART NO.” are not available as spare parts.
- This mark “ } ” in the REMARKS column means these parts are interchangeable.
- The second letter of the shaded ( ) part number is O, not zero.
- The second letter of the shaded ( ) part number is I, not one.

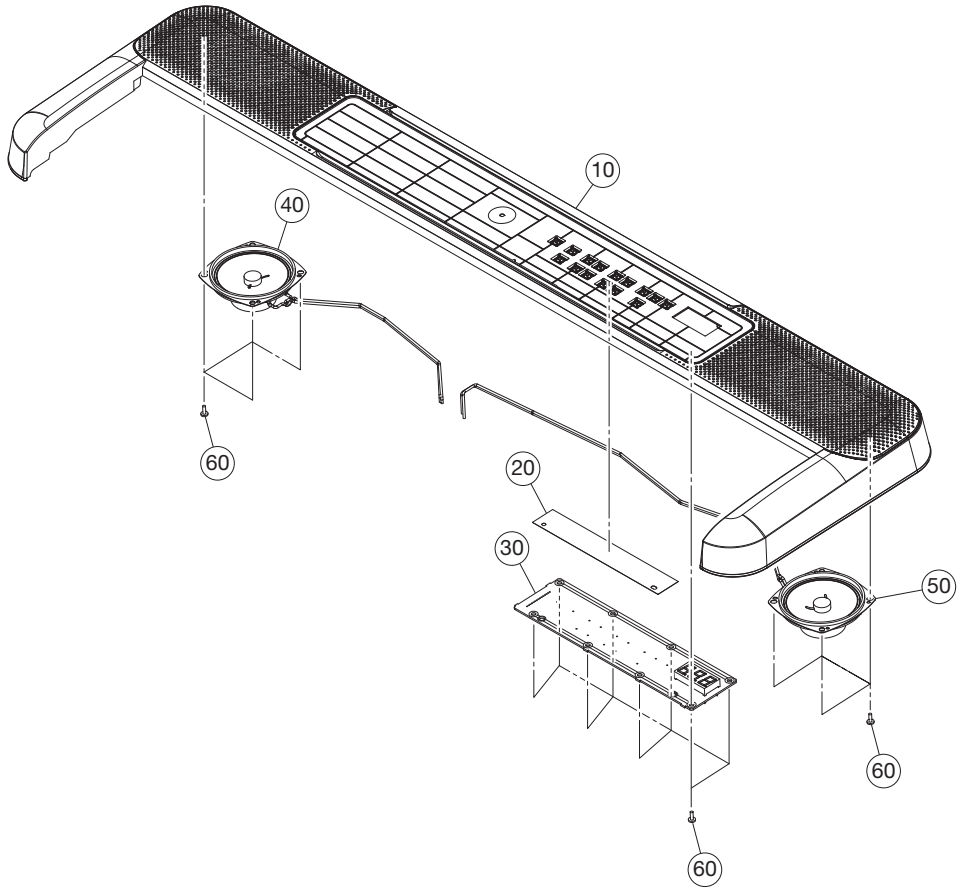
OVERALL ASSEMBLY



	REF NO.	PART NO.	DESCRIPTION		部品名	REMARKS		QTY
		--	MODEL	PSR-F52	モデル		(VDN1120)	
		--	OVERALL ASSEMBLY	PK E	総組立	U,E,B,I,K,Y,P,Z	(VEE0680)	
		--	OVERALL ASSEMBLY	PK CHN	総組立	O	(VEE0690)	
		--	OVERALL ASSEMBLY	PK R	総組立	R	(VEE0700)	
	10	--	UPPER CASE ASSEMBLY		上ケース Ass'y		(VEE0880)	
	20	--	LOWER CASE ASSEMBLY		下ケース Ass'y		(VEE0890)	
*	30	**VEE12300**	PET SHEET E		PETシート E	U,E,B,I,K,Y,P,Z		
*	30	**VEE12500**	PET SHEET R		PETシート R	R		
*	30	**VEE12400**	PET SHEET CHN		PETシート CHN	O		
*	40	**VEE09000**	BATTERY LID ASSEMBLY		電池蓋 Ass'y			
	100	**WE972900**	BIND HEAD P-TIGHT SCREW	3.0X12 MFZN2W3	Pタイト＋BIND			7
*	110	**WF267200**	SCREW TP #P +BIND	3.0X30 MFZN2W3	Pタイト＋BIND			5
			ACCESSORIES		付属品			
*		**VEJ24700**	MUSIC REST WITH BAG	BLACK	譜面板袋入り			
⚠		**ZP655800**	ADAPTOR SET IN BAG	PA-130B E YES	アダプターセット袋入	E,I,R	(VEE1690)	
⚠		**ZP655900**	ADAPTOR SET IN BAG	PA-130B B YES	アダプターセット袋入	B	(VEE1700)	
⚠		**ZP656000**	ADAPTOR SET IN BAG	PA-130B K YES	アダプターセット袋入	K	(VEE1710)	
⚠		**ZP656100**	ADAPTOR SET IN BAG	PA-130B BRA YES	アダプターセット袋入	P	(VEE1720)	
⚠		**ZU900600**	ADAPTOR SET IN BAG	PA-130B IN YES	アダプターセット袋入	Z	(VEE1730)	
⚠		**ZP656200**	ADAPTOR SET IN BAG	PA-130B CHN YES	アダプターセット袋入	O	(VEE1740)	

*: New Parts

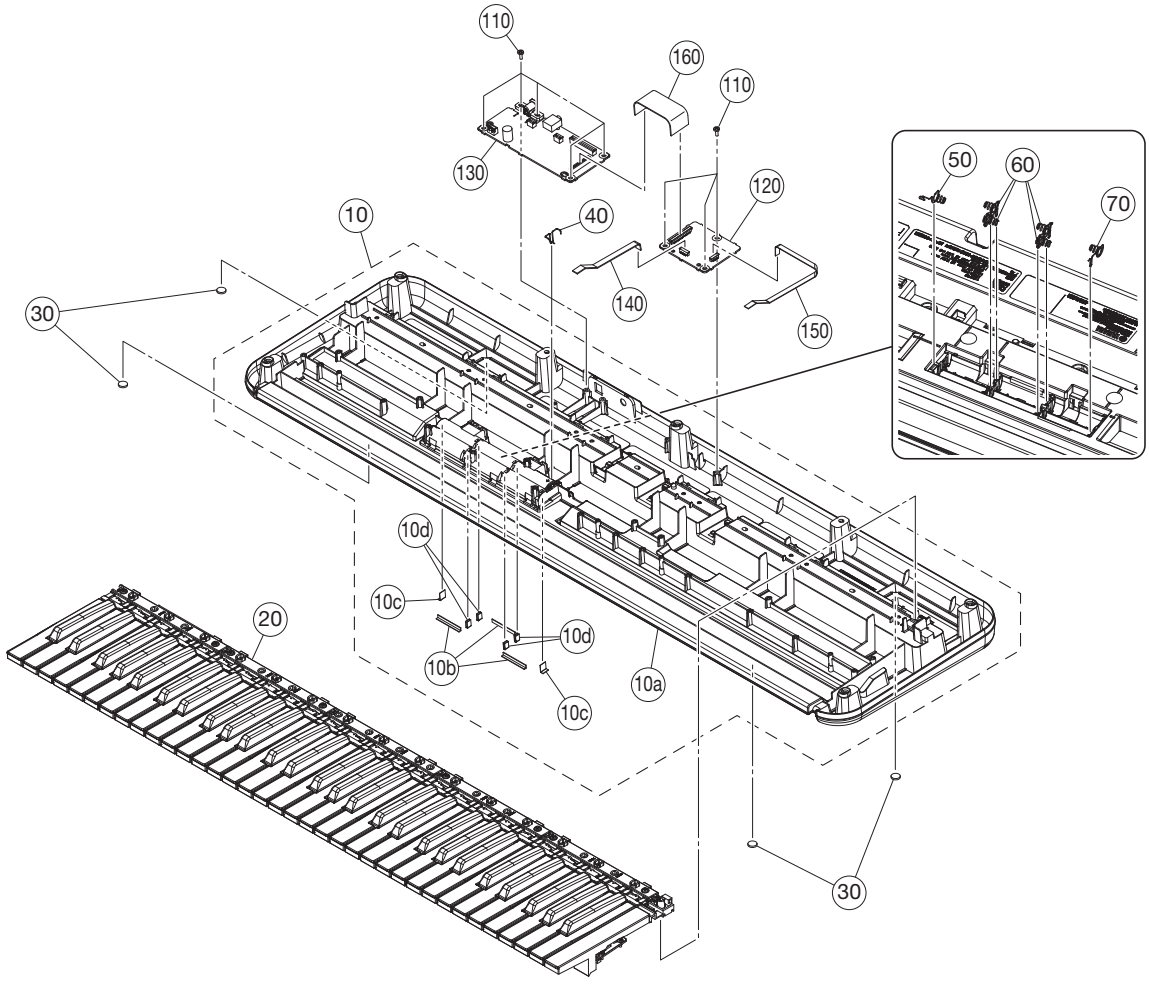
UPPER CASE ASSEMBLY



	REF NO.	PART NO.	DESCRIPTION		部品名	REMARKS	QTY
			UPPER CASE ASSEMBLY		上ケース Ass'y		
		--	UPPER CASE ASSEMBLY		上ケース Ass'y	(VEE0880)	
	10	--	UPPER CASE MOLDING		上ケース成形品	(VEE1160)	
*	10	VEE116I0	UPPER CASE MOLDING		上ケース成形品		
	20	--	NONWOVEN CLOTH	155X25X0.35	不織布	(VEE1390)	
*	30	VEA44000	CIRCUIT BOARD PN	PCB PN	PCB PN		
*	40	YM376A00	LOUD SPEAKER	8.0cm 4ohm 3W	スピーカ		
*	50	YM377A00	LOUD SPEAKER	8.0cm 4ohm 3W	スピーカ		
	60	WE774801	BIND HEAD P-TIGHT SCREW	3.0X8 MFZN2W3	Pタイト＋BIND		16

*: New Parts

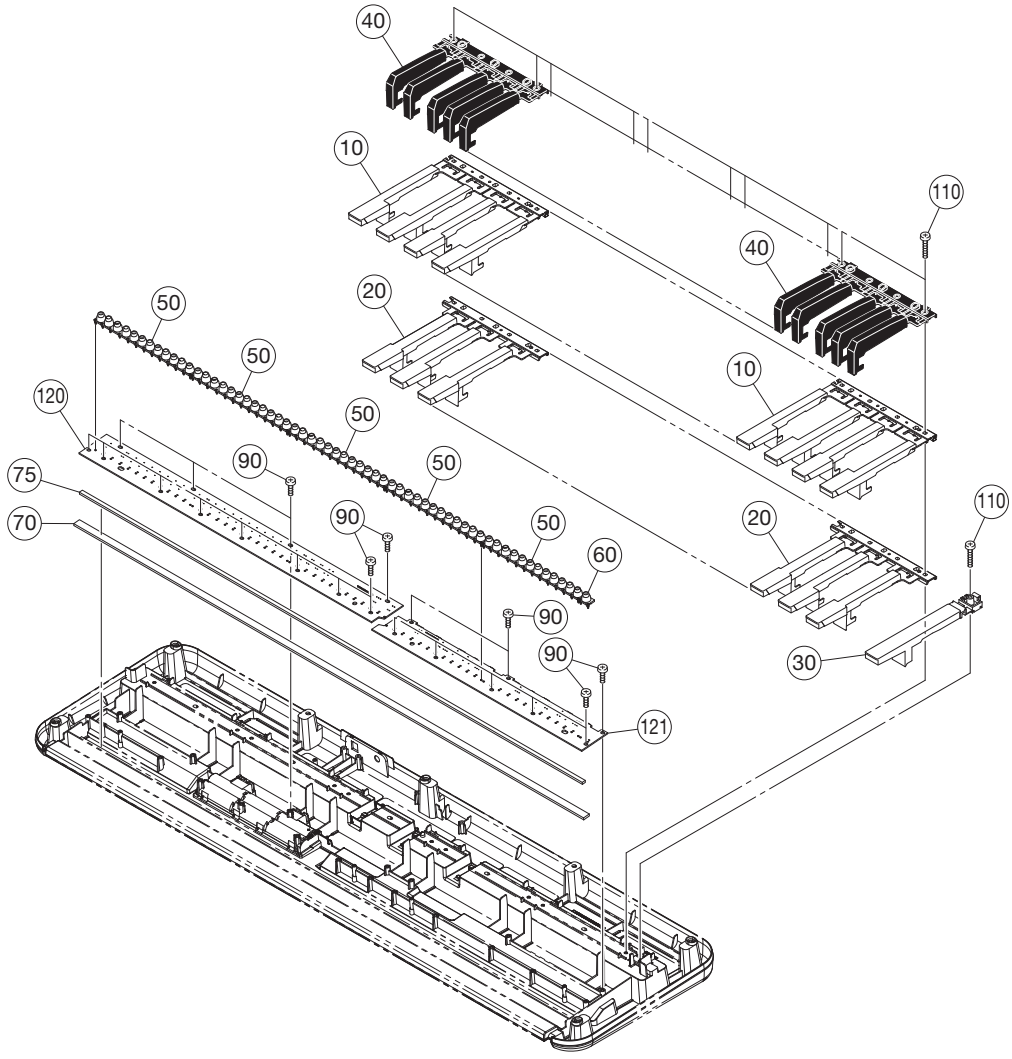
■ LOWER CASE ASSEMBLY



	REF NO.	PART NO.	DESCRIPTION		部品名	REMARKS	QTY
			LOWER CASE ASSEMBLY		下ケース Ass'y		
		--	LOWER CASE ASSEMBLY		下ケース Ass'y	(VEE0890)	
*	10	**VFE30000**	LOWER CASE SUB ASSY		下ケースサブAss'y		
	10a	--	LOWER CASE MOLDING		下ケース成形品	(VEE1170)	
	10a	--	LOWER CASE MOLDING		下ケース成形品	(VEE117I)	
	10b	--	NONWOVEN CLOTH	34X7X0.15	不織布	(VEJ4660)	3
	10c	--	NONWOVEN CLOTH	13X8X0.35	不織布	(ZP28140)	2
	10d	--	NONWOVEN CLOTH	18X5X0.35	不織布	(ZP28150)	4
	20	--	16NS-C61 KEYBOARD	16N 61 D1	16NS－C61鍵盤	(VEE1880)	
	30	**WW693500**	RUBBER FOOT		ゴム脚		4
	40	--	BATTERY TERMINAL A		接点バネA	(VAX3430)	
	40	**ZM711300**	BATTERY TERMINAL A		接点バネA		
*	50	**VEJ47500**	BATTERY TERMINAL B3		接点バネB3		
	60	**VAX34500**	BATTERY TERMINAL C		接点バネC		4
	70	**VAX34600**	BATTERY TERMINAL D		接点バネD		
	110	**WE774801**	BIND HEAD P-TIGHT SCREW	3.0X8 MFZN2W3	Pタイト＋BIND		8
*	120	**VEA43700**	CIRCUIT BOARD DM	PCB DM	PCB DM		
*	130	**VEA43900**	CIRCUIT BOARD AM	PCB AM	PCB AM		
*	140	**VEH60600**	FFC_MK-L	13P 120MM P=0.5	FFC_MK－L		
*	150	**VEH60700**	FFC_MK-H	11P 160MM P=0.5	FFC_MK－H		
*	160	**VEH60500**	FFC_AM	25P 80MM P=1.0	FFC_AM		

*: New Parts

KEYBOARD ASSEMBLY



REF NO.	PART NO.	DESCRIPTION		部品名	REMARKS	QTY
		KEYBOARD ASSEMBLY		鍵盤Ａｓｓ’ｙ		
	--	16NS-C61 KEYBOARD	16N 61 D1	１６ＮＳ－Ｃ６１鍵盤	(VEE1880)	
10	--	WHITE KEY	16NS CEGB	白鍵ＣＥＧＢ	(ZE36980)	5
10	**ZE3698I0**	WHITE KEY	16NS CEGB	白鍵ＣＥＧＢ		5
20	--	WHITE KEY	16NS DFA	白鍵ＤＦＡ	(ZE36990)	5
20	**ZE3699I0**	WHITE KEY	16NS DFA	白鍵ＤＦＡ		5
30	--	WHITE KEY 16N C' PSR-170/		白鍵Ｃ	(V476030)	
30	**V4760310**	WHITE KEY 16N		白鍵Ｃ		
40	--	BLACK KEY T=1.5	16NS #	黒鍵	(WZ16830)	5
40	**WZ1683I0**	BLACK KEY T=1.5	16NS #	黒鍵		5
50	--	RUBBER CONTACT 16N-1M	16N OCT 1M	接点ゴム	(VZ27180)	5
50	**WE152501**	RUBBER CONTACT	16N-1M OCT LIM	接点ゴム		5
60	--	RUBBER CONTACT 16N-1M C'	16N C_ 1M	接点ゴム	(VZ27190)	
60	**ZQ194600**	RUBBER CONTACT	16N C 1M	接点ゴム		
70	**VZ303000**	FELT L 827X11X3.5	827 11 SHIRO	フェルトＬ		
75	**VZ302901**	FELT U	836 5 SHIRO	フェルトＵ		
90	**WE774801**	BIND HEAD P-TIGHT SCREW	3.0X8 MFZN2W3	Ｐタイト＋ＢＩＮＤ		20
110	**WF49200R**	BIND HEAD TAPPING SCREW-P	3.0X20 MFZN2W3	Ｐタイト＋ＢＩＮＤ		11
* 120	**VDX70200**	CIRCUIT BOARD MK-L	16N 61	ＰＣＢ ＭＫ－Ｌ		
* 121	**VDX70300**	CIRCUIT BOARD MK-H	16N 61	ＰＣＢ ＭＫ－Ｈ		

*: New Parts

■ ELECTRICAL PARTS

DM/AM/PN

	REF NO.	PART NO.	DESCRIPTION		部品名	REMARKS	QTY
			ELECTRICAL PARTS		電気部品		
*		**VEA43700**	CIRCUIT BOARD DM	PCB DM	PCB DM	(VEA4360)(YM312C0)	
*		**VEA43900**	CIRCUIT BOARD AM	PCB AM	PCB AM	(VEA4380)(YM313C0)	
*		**VEA44000**	CIRCUIT BOARD PN	PCB PN	PCB PN	(VEA4380)(YM313C0)	
*		**VDX70200**	CIRCUIT BOARD MK-L	16N 61	PCB MK-L	(VEF2570)(YM240C0)	
*		**VDX70300**	CIRCUIT BOARD MK-H	16N 61	PCB MK-H	(VEF2590) (YM241C0)	
*		**VEA43700**	CIRCUIT BOARD DM	PCB DM	PCB DM	(VEA4360)(YM312C0)	
	C11	**UF047330**	ELECTROLYTIC CAP. (CHIP)	33 25V	チップケミコン		
	C23	**--**	CAPACITOR	100UF 16V	チップケミコン	(ZQ19580)	
*	C23	**ZQ195801**	CAPACITOR	100UF 16V	チップケミコン		
	D101	**--**	DIODE	KDS160-RTK/P TP	ダイオード	(WC39880)	
	D101	**--**	DIODE	1SS355VMTE-17	ダイオード	(WW78390)	
	D101	**--**	DIODE	1SS355 SOD-323 TP	ダイオード	(ZJ68460)	
	D101	**--**	DIODE	1SS352 TE-	ダイオード	(ZP35860)	
*	IC11	**YM274A00**	IC	TPS562208DDCR	電源IC		
	IC101	**YE577A00**	IC	YMW830-VZ	CPU／周辺IC		
*	IC302	**YM467B00**	IC	WAVE/PROGRAMPSR-F52	書込済ROM		
	IC501	**YH566A00**	IC	NJM8080RB1(TE1)	アンプIC MSOP		
	XL1	**--**	RESONATOR QUARTZ	16.9344M DSX321G	水晶振動子	(WM13520)	
	IC104	**YK064A00**	IC	S-1009N29I-M5T1U	リセットIC		
*		**VEA43900**	CIRCUIT BOARD AM	PCB AM	PCB AM	(VEA4380)(YM313C0)	
*		**VEA44000**	CIRCUIT BOARD PN	PCB PN	PCB PN	(VEA4380)(YM313C0)	
⚠	D3	**ZQ176200**	DIODE	RL202 TE- 26	ダイオード		
	IC601	**YF011A00**	IC	TA8227APG-D12-H-T	アンプIC		
⚠	JK1	**WZ704401**	CONNECTOR	DC-502-AG-PBT-2.0-	電源コネクタ		
	JK601	**ZA590001**	CONNECTOR	JACK MINI STEREO	ホーンコネクタ		
	LD801	**ZF495000**	LED DISPLAY	3HSR8146B39	LEDディスプレイ		
	Q1	**--**	TRANSISTOR	TTB1020B,S4X(S	トランジスタ 2SB	(ZW58930)	
	C1	**UR848471**	ELECTROLYTIC CAPACITOR	470.00 25.0V RX TP	ケミコン		
	C2	**UR848471**	ELECTROLYTIC CAPACITOR	470.00 25.0V RX TP	ケミコン		
	C601	**UR866101**	ELECTROLYTIC CAPACITOR	1.00 50.0V RX TP	ケミコン		
	C602	**UR866101**	ELECTROLYTIC CAPACITOR	1.00 50.0V RX TP	ケミコン		
	C605	**UR837471**	ELECTROLYTIC CAPACITOR	47.00 16.0V RX TP	ケミコン		
	C605	**V7887400**	ELECTROLYTIC CAPACITOR	47.00 16.0V RX TP	ケミコン		
	C606	**UR837471**	ELECTROLYTIC CAPACITOR	47.00 16.0V RX TP	ケミコン		
	C606	**V7887400**	ELECTROLYTIC CAPACITOR	47.00 16.0V RX TP	ケミコン		
	C608	**UR838101**	ELECTROLYTIC CAPACITOR	100.00 16.0V RX TP	ケミコン		
	C608	**WG226201**	ELECTROLYTIC CAPACITOR	100.00 16.0V TP	ケミコン		
	C609	**UR848101**	ELECTROLYTIC CAPACITOR	100.00 25.0V RX TP	ケミコン		
	C610	**UR848101**	ELECTROLYTIC CAPACITOR	100.00 25.0V RX TP	ケミコン		
	C613	**UR848101**	ELECTROLYTIC CAPACITOR	100.00 25.0V RX TP	ケミコン		
	C613	**WH775200**	ELECTROLYTIC CAPACITOR	100.00 25.0V TP	ケミコン		
	C614	**UR838471**	ELECTROLYTIC CAPACITOR	470.00 16.0V RX TP	ケミコン		
	C615	**UR838471**	ELECTROLYTIC CAPACITOR	470.00 16.0V RX TP	ケミコン		
	C616	**--**	MONOLITHIC POLYESTER F. CAP.	0.15 50V J RX TP	積層マイラーコン	(VE32620)	
	C617	**--**	MONOLITHIC POLYESTER F. CAP.	0.15 50V J RX TP	積層マイラーコン	(VE32620)	
⚠	F1	**WN081300**	CURRENT CUTOFF FUSE	SEMKO/UL/PSE 2.00A	ヒューズ250V		
	Q2	**--**	TRANSISTOR	KTC3198-GR-AT/PB	トランジスタ 2SC	(WZ85330)	
	SW800	**WG31840R**	TACT SWITCH	SKRGAMD010	タクトSW		
	SW801	**WG31840R**	TACT SWITCH	SKRGAMD010	タクトSW		
	SW802	**WG31840R**	TACT SWITCH	SKRGAMD010	タクトSW		
	SW803	**WG31840R**	TACT SWITCH	SKRGAMD010	タクトSW		
	SW804	**WG31840R**	TACT SWITCH	SKRGAMD010	タクトSW		
	SW805	**WG31840R**	TACT SWITCH	SKRGAMD010	タクトSW		
	SW806	**WG31840R**	TACT SWITCH	SKRGAMD010	タクトSW		
	SW807	**WG31840R**	TACT SWITCH	SKRGAMD010	タクトSW		
	SW811	**WG31840R**	TACT SWITCH	SKRGAMD010	タクトSW		
	SW812	**WG31840R**	TACT SWITCH	SKRGAMD010	タクトSW		
	SW813	**WG31840R**	TACT SWITCH	SKRGAMD010	タクトSW		
	SW814	**WG31840R**	TACT SWITCH	SKRGAMD010	タクトSW		
	SW815	**WG31840R**	TACT SWITCH	SKRGAMD010	タクトSW		
	SW816	**WG31840R**	TACT SWITCH	SKRGAMD010	タクトSW		
	SW817	**WG31840R**	TACT SWITCH	SKRGAMD010	タクトSW		
	D1	**--**	DIODE	KDS160-RTK/P TP	ダイオード	(WC39880)	
	D1	**--**	DIODE	1SS355VMTE-17	ダイオード	(WW78390)	
	D1	**--**	DIODE	1SS355 SOD-323 TP	ダイオード	(ZJ68460)	
	D1	**--**	DIODE	1SS352 TE-	ダイオード	(ZP35860)	
	D2	**--**	DIODE	KDS160-RTK/P TP	ダイオード	(WC39880)	

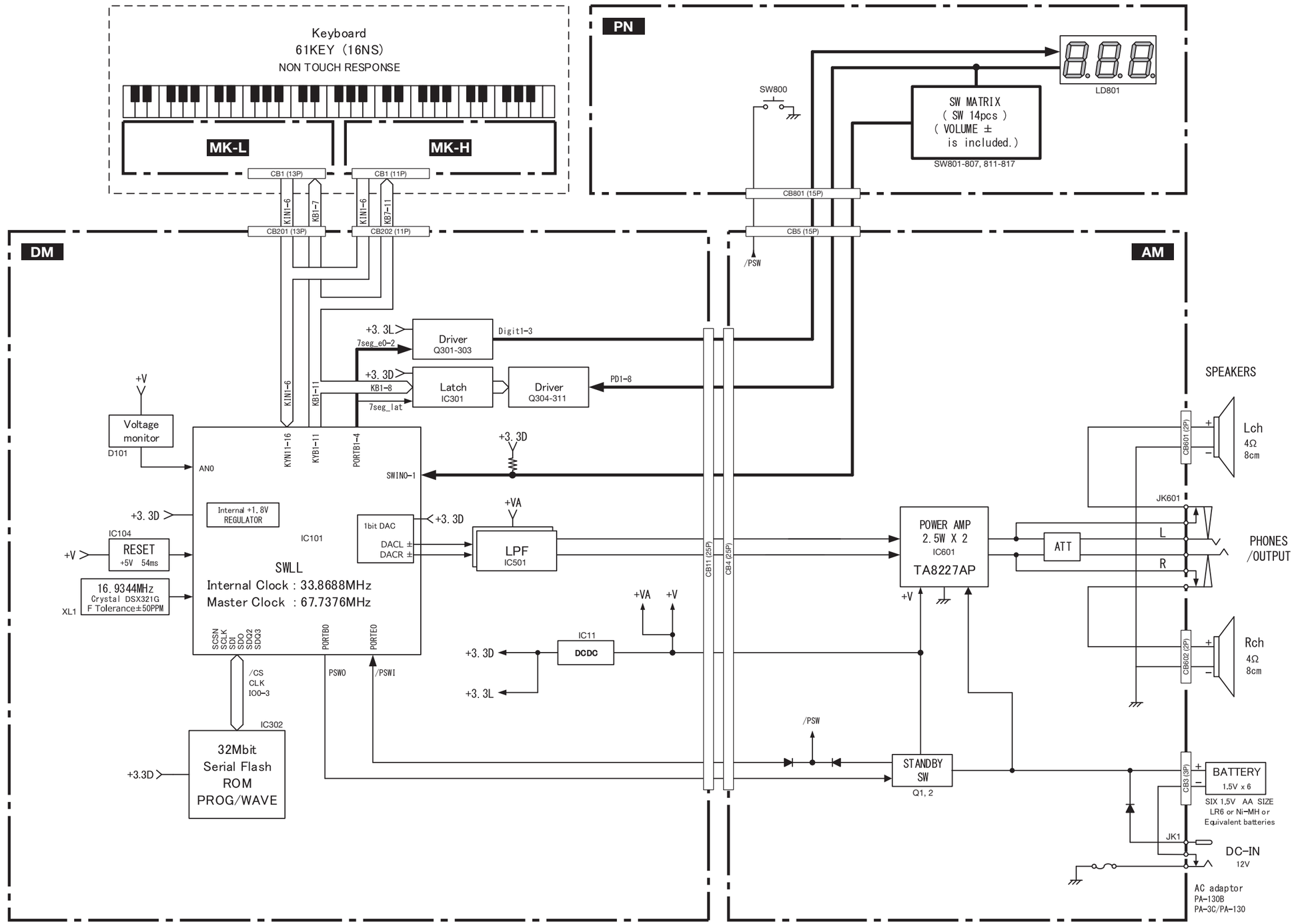
*: New Parts

AM/PN/MK-L/MK-H

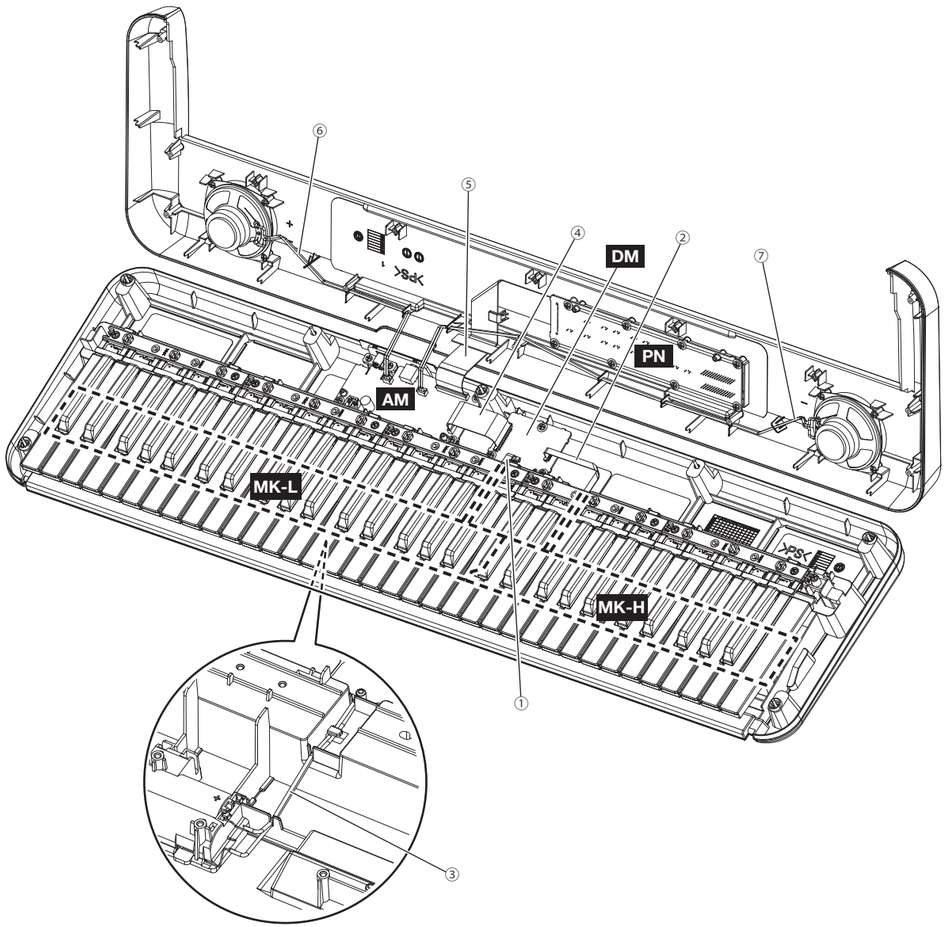
REF NO.	PART NO.	DESCRIPTION		部品名	REMARKS	QTY
D2	--	DIODE	1SS355VMTE-17	ダイオード	(WW78390)	
D2	--	DIODE	1SS355 SOD-323 TP	ダイオード	(ZJ68460)	
D2	--	DIODE	1SS352 TE-	ダイオード	(ZP35860)	
R609	**RD153220**	CARBON RESISTOR (CHIP)	2.2 1/4 J TP	チップ抵抗		
R610	**RD153220**	CARBON RESISTOR (CHIP)	2.2 1/4 J TP	チップ抵抗		
R611	**RD155331**	CARBON RESISTOR (CHIP)	330.0 1/4 J TP	チップ抵抗		
R612	**RD155331**	CARBON RESISTOR (CHIP)	330.0 1/4 J TP	チップ抵抗		
R613	**RD155221**	CARBON RESISTOR (CHIP)	220.0 1/4 J TP	チップ抵抗		
R614	**RD155221**	CARBON RESISTOR (CHIP)	220.0 1/4 J TP	チップ抵抗		
D801	**VD631601**	DIODE	1SS133,176,HSS104	ダイオード		
-807	**VD631601**	DIODE	1SS133,176,HSS104	ダイオード		
*	**VDX70200**	CIRCUIT BOARD MK-L	16N 61	PCB MK-L	(VEF2570)(YM240C0)	
D1	--	DIODE	KDS160-RTK/P TP	ダイオード	(WC39880)	
-36	--	DIODE	KDS160-RTK/P TP	ダイオード	(WC39880)	
D1	--	DIODE	1SS355VMTE-17	ダイオード	(WW78390)	
-36	--	DIODE	1SS355VMTE-17	ダイオード	(WW78390)	
D1	--	DIODE	1SS355 SOD-323 TP	ダイオード	(ZJ68460)	
-36	--	DIODE	1SS355 SOD-323 TP	ダイオード	(ZJ68460)	
D1	--	DIODE	1SS352 TE-	ダイオード	(ZP35860)	
-36	--	DIODE	1SS352 TE-	ダイオード	(ZP35860)	
*	**VDX70300**	CIRCUIT BOARD MK-H	16N 61	PCB MK-H	(VEF2590) (YM241C0)	
D37	--	DIODE	KDS160-RTK/P TP	ダイオード	(WC39880)	
-61	--	DIODE	KDS160-RTK/P TP	ダイオード	(WC39880)	
D37	--	DIODE	1SS355VMTE-17	ダイオード	(WW78390)	
-61	--	DIODE	1SS355VMTE-17	ダイオード	(WW78390)	
D37	--	DIODE	1SS355 SOD-323 TP	ダイオード	(ZJ68460)	
-61	--	DIODE	1SS355 SOD-323 TP	ダイオード	(ZJ68460)	
D37	--	DIODE	1SS352 TE-	ダイオード	(ZP35860)	
-61	--	DIODE	1SS352 TE-	ダイオード	(ZP35860)	

*: New Parts

■ PSR-F52 BLOCK DIAGRAM



■ PSR-F52 CIRCUIT BOARD LAYOUT & WIRING



No.	Unit Name (ユニット名)	Location (ロケーション)	Part No. (部品番号)	Connector assembly (束線名)	Destination (配線先)						Remarks (備考)
①	LOWER CASE ASSEMBLY	140	(VEH6060)	WIRING ASSEMBLY	MK-L - CB1	*1	*6	DM - CB201	*1	*6	13P L=120
②		150	(VEH6070)	WIRING ASSEMBLY	MK-H - CB1	*1	*6	DM - CB202	*1	*6	11P L=160
③		170	(VEH6100)	CONNECTOR ASSEMBLY BATT	BATTERY TERMINAL A	*2	*10	AM - CB3	*1	*7	3P L=250-235
					BATTERY TERMINAL B3	*2	*10				
④		160	(VEH6050)	WIRING ASSEMBLY	AM - CB4	*1	*6	DM - CB11	*1	*6	25P L=80
⑤	PCD ASSY AMPN	WH010	(VEX4210)	WIRING ASSEMBLY	PN - CB801	*3	*5	AM - CB5	*1	*9	15P L=220
⑥	UPPER CASE ASSEMBLY	40	(YM376A0)	WIRING ASSEMBLY SP	SPEAKER L	*4	*5	AM - CB601	*1	*8	2P L=80
⑦		50	(YM377A0)	WIRING ASSEMBLY SP	SPEAKER R	*4	*5	AM - CB602	*1	*7	2P L=80

* The parts with "( )" in "**Part No.**" are not available as spare parts.

*1: Installation
*2: Manual soldering
*3: Dip soldering
*4: Connected as Assembly
*5: Connected.
*6: The contact point of the connector is adsunted to the conductor of FFC
*7: Red wire is adjusted to Pin 1 mark (△ mark).
*8: White wire is adjusted to Pin 1 mark (△ mark).
*9: Edge mark is adjusted to Pin 1 mark (△ mark).
*10: Red wire is connected to (+) terminal. Black wire is connected to (-) terminal.

Caution: Be sure to attach the removed filament tape just as it was before removal.

PSR-F52 OVERALL CIRCUIT DIAGRAM (DM)

< Page 1 >

DM

DC/DC CONVERTER

OP AMP

CPU SWLL

RESET

FLASH ROM 32M

LATCH

to AM-CB4 <Page 2 C7>

to MK-L-CB1 <Page 3 C8>

to MK-H-CB1 <Page 3 C2>

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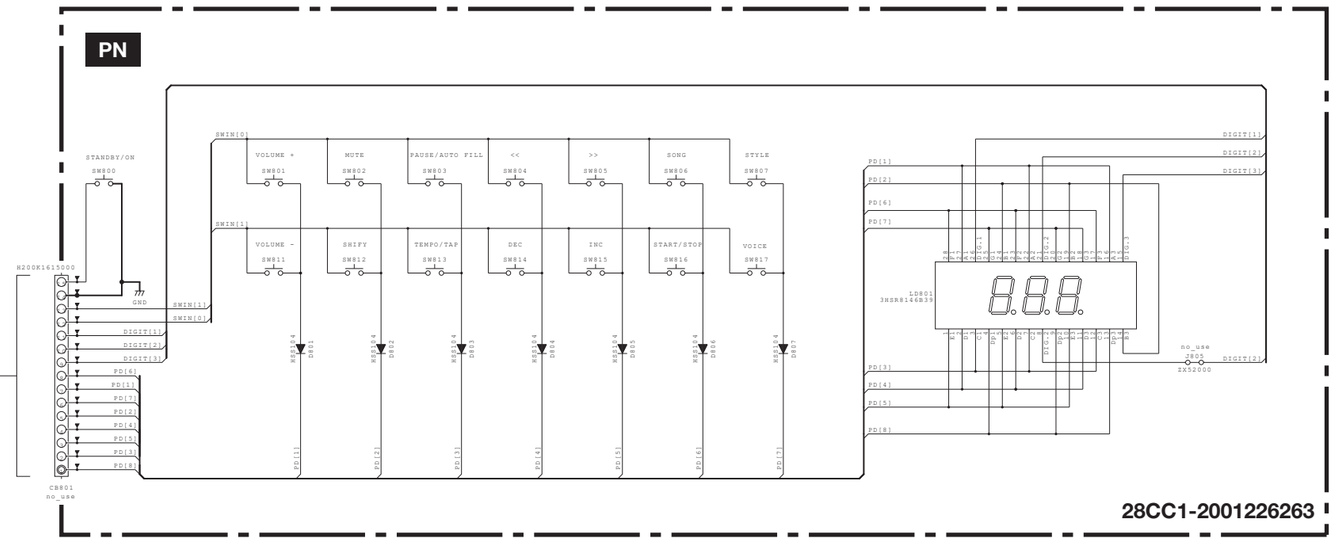
PSR-F52 OVERALL CIRCUIT DIAGRAM (DM)

< Page 2 >

PN



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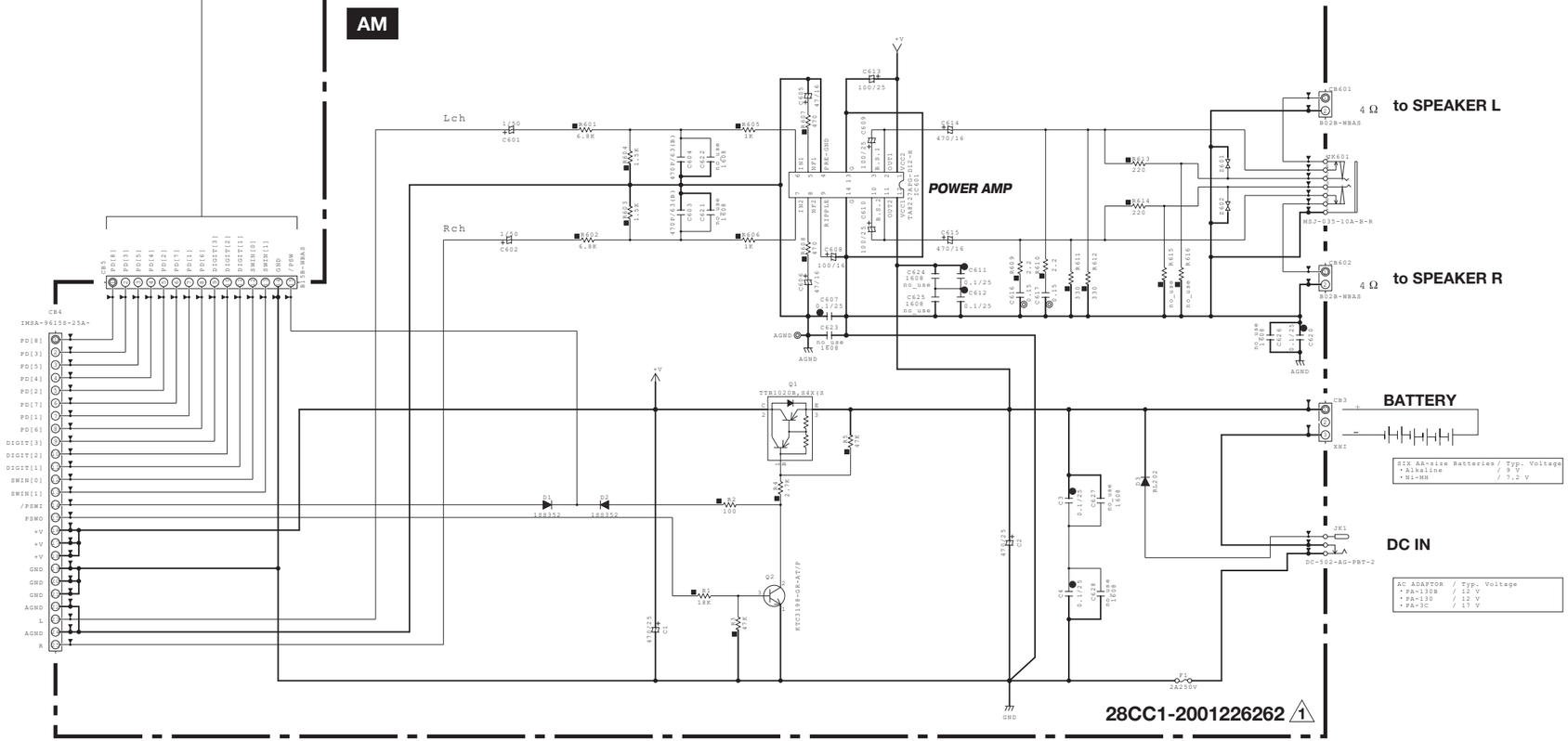
AM



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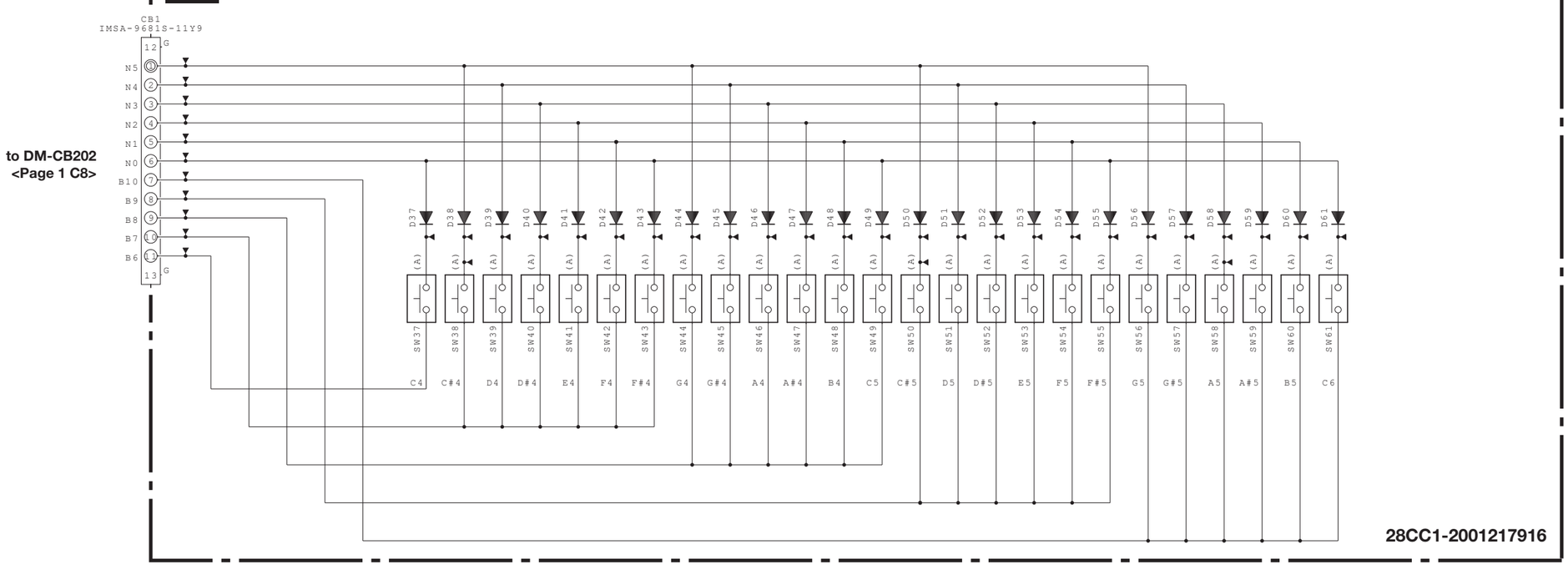
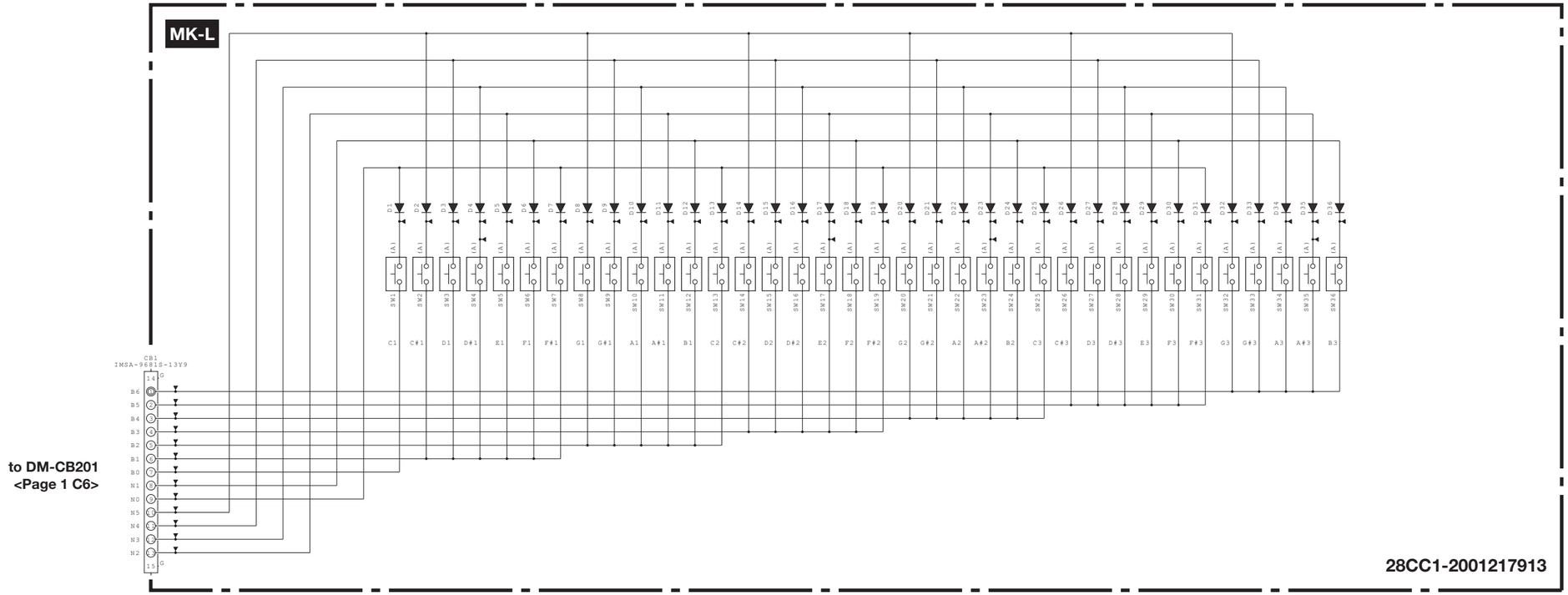
PSR-F52 OVERALL CIRCUIT DIAGRAM (MK-H, MK-L)

< Page 3 >

MK-H



MK-L